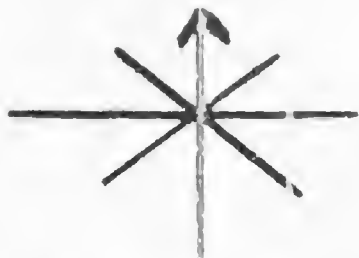


SI-MNH-958e

7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 8 Nov 1965
Pg. # 1

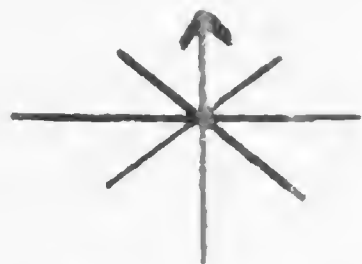
Norm - in port

time	species	#	dir.	hgt.	remarks	loc.
1300					Clean Harbor, begin observations	
1345					Begin observations after aerial pictures taken	
1420	Pterodroma Pterodroma	1	N.D.		looked most like Dark rump but had only moderate black edge to leading edge of underwing only; very brown-backed, white forehead visible; could have been 9FP. Sat on water, flew w/o diving	
1429	Wedgetail	1	S			
1430	"	1	S			
1777	Pom Jaeger	1	N			
1502	R. F. Brown Booby	1	N		imm.	
1502	Wedgetail	1	N			
1509	WTTB	1				
1511	Wedgetail	1			got off H ₂ O	
1516	Nauwells	1	W	2'	slightly smaller than wedgetail, straight rapid flight	
1519	Sooty/slenderbill shear.	1	SE			
1522	Shear-Pet	1	Ø			
1526	White-N. Pet.	1	NE			
1526	Pterod.	1	Ø			
1528	Bird	1	E			
1536	P. Hypoleuca	1	SE			
1540	RFB	3				
1540	Bird	1	SW			
1540	Tern sp.	2				
1542	Pterod.	1	E			
1543	Tern sp.	2				
1543	RFB	1	N			
1543	Hypoleuca	3				
1545	C. Noddy	1	SE			
1546	Tern sp.	1	SW			
1547	P. Hypoleuca	1	S			
1548	Tern sp.	3	N			
1550	Shear-Pet	3	N			
1551	Bird	1				
1553	Shear-Pet	3	Ø			
1554	Pterod.	3	Ø			
1556	Storm-Pet	1			bl. w/wk. rmp.	
1557	Shear-Pet	1	NW			
1602	Storm-Pet	2	NW		bl. w/wk. sp.	
1605	P. hypoleuca	1				
1610	"	2	NW			
1612	Storm Pet	1	NW			
1615	Tern sp.	1	SE		first and, low, dark?	

PT 4
 W 4
 PG 1
 RFB 5
 WTT 1
 NS 1
 SS 1
 S-P 10
 WNP 1
 Bird 3
 PH 7
 Tern 8
 CN 1
 SP 4
 58/37

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



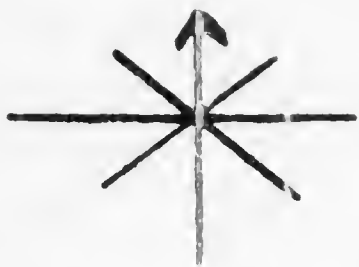
DATE 8 Nov 1965
Pg. # 2

noon - in port

time	species	#	dir.	hgt.	remarks	loc.
1617	P. hypoleuca	1	↗			
1617	Tern (sp.)	1	SE			
1620	P. hypoleuca	1	S			SP 19
1620	Wedgetail	1	NE			PT 6
1624	P. hypoleuca	1				Tern 8
1626	Sooty Tern	1	⊙			PL 25
1628	Pom Jaeger	3	N			W 13
1628	Storm Pet	1	N			ST 1
1631	P. hypoleuca	1	SE			PJ 5
1632	"	2	S			SP 2
1635	Bl-wing Pet	1	S			BWP 2
1640	Storm Pet	1				QFP 1
1640	P. hypoleuca	1				SS 3
1640	QFP Petrel	1			flushed	BIA 1
1643	Pom Jaeger	1	SW			
1643	P. hypoleuca	1	SE		joined 1640	
1645	B-W Petrel	1	↗			
1646	Sooty-SB Shear	1	S			
1652	Shear-Pet	1	S			
1655	"	1	SE			
F 1655	Lg Pterodroma	1	S			
	Sm "	4				
1657	P. hypoleuca	1	SW			
1657	Bird	1				
					flushed; small Jaeger sp. or Shear-Pet; dark above, light below except wings, no white in wings; flapping & gliding over surface	
1701	P. hypoleuca	1				
1705	Storm Petrel	1	⊙			
1708	Sooty Shear	2	S			
1710	Pom Jaeger	1	SW			
1712	P. hypoleuca	5	⊙			
1713	"	1	W			
1717	"	1	E			
1717	Pom Jaeger?	2	W			
1720	Shear Pets	15			scattered over horizon	
1722	P. hypoleuca	4				
1725	Tern sp.	7				
1725	Wedgetail	1	⊙			
1727	Shear-Pet	2				
1727	P. hypoleuca	2	⊙			
1727	Wedgetail	2	N			
1732	P. hypoleuca	3	⊙			

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E



DATE 8 Nov 68
Pg. 3

Noon - in port

time	species	#	dir.	hgt.	remarks	loc.
1736	wedgetail	1				
1736	P. hypoleuca	2				
1740	shear pet	4				
1740	shear pet	1			"It's pink, whatever it is" - ... K. Amerman	
1740	shearwater	1				
1744	shear - pet	2				
1745	Sooty/SB	1	S			
1745	Tern	1			sooty?	
1748	wedgetail	1				
51	Storm Pet	1				
51	Sooty - 8000	1				
several 55	Sunseb	1			cease obs.	

W - 2
PK - 2
S-P - 7
SS - 2
Tern - 1
SP - 1

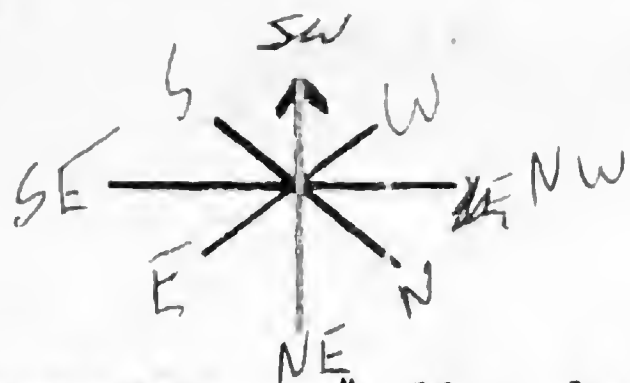
15/10

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

Pelagic Bird
Survey

DATE 9 Nov. 65
Pg. # 1



Noon : 19°47.8' N - 161°03' W

time	species	#	dir.	hgt.	remarks	loc.
0625					begin obs.	
0627	PFB	1			adult sitting on H ₂ O	
0646 0630	sunrise					
0630	BIRD	1	0		sitting on H ₂ O	
0630	Shear-Pet	1				
0634	Wedgetail	1	0			
0702	"	1	SE			
0709	"	2	SE			
0709	Red-foot	1	SE		Ad.	Bird 1-1
0709	G. Frigate	1	SE		Ad ♂	S-P 9-14
0712	Wedgetail	1	SE			WT 8-9
0714	Sooty Tern	2	SE			RFB 1-1
0715	"	1	SE			G. Frig. 1-1
0715	Wedgetail	1	SE			ST 13-36
0715	Sooty Tern	2	SE			WTB 2-2
0717	"	3	SE			Ptero 1-1
0717	"	3	SE			P. hypo 3-3
0717	WT Tropic	1			on water	STorm 1-1
0724	Wedgetail	1	S			S-S 2-2
F 0726	Sooty Tern	7	SE			GP 1-4
0730	Wedgetail	1	SE			43-74
0731	Shear-Pet	1	0			Flocks 2-14
0733	Wedgetail	1	SE			
0740	Shear-Pet	3				
F 0740	Sooty Tern	7	SE			
0742	"	2	SE			
0742	Shear-Pet	1	SE			
0748	"	2	0			
0755	Pterodroma	1	SE			
0800	Shear-Pet	2	SE			
0800	"	1	S			
0802	P. hypoleuca	1	?			
0807	"	1	SE			
0807	Storm Pet	1	Q			
0807	P. hypoleuca	1	S			
0807	Sooty-Slender billed Shear.	1	S			
0810	"	1	SE			
0811	Shear-Pet	1	S			
0815	Shear-Pet.	1	?			
0820	Sooty Tern	2	SE			
0823	"	2	SE		ad. collected, eaten by Shark.	
0823	WT Tropic	1	Q			
0830	SOOTY T.	2			1 ad, 1 imm	
0831	Golden Plover	4	Q			
0917	Sooty Tern	2	SE			
0925	Sooty Tern	1	SE			

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

Pelagic Bird
Survey

DATE 9 Nov 1965
Pg. # 22



time	species	#	dir.	hgt.	remarks	loc.
0930	G. Plover	2	GA			
0932	Sooty Tern	1	SE			
0933	Bird	1			on H ₂ O	
0935	P. hypoleuca	1	W			
0937	Sooty Slender	1	SE			
0943	P. hypoleuca	1	S			
0950	Sooty Tern	2	S		ad + immature	
0954	Sooty Slender	1	S			
0955	P. hypoleuca	2	GA			
0959						
1002	P. hypoleuca	1	SW		Whale 2	
1013	Sooty Tern	2	S			
1017	Wedgetail	1	E			
1021	Sooty Tern	2	SE		dark	
1021	Frigate	1	SE		♂	
1028	Bn. Booby	1	SE		Imm?	
1033	Fairy Tern	1	SE			
1050	WTTB	1	SE			
1104	RTTB	1	SE			
1222	WTTB	1	SE		coll 1110 - RTTB	
1335					ship underway again after recovering RTTB.	
1339	Wedgetail	1	GA			
1339	"	1	GA			
1344	Pterodroma sp.	1	E			
1352	Wedgetail	1	S		sitting on H ₂ O	
1418	P. hypoleuca	2				
1443	Shear-Pet	1	NE?		burst of "twittering" passed over ship E, no birds visible	
1523	App. White-Eye	2	W			
1532	WTTB	1				
1539	Storm Pet	1			out by slick (ship's wake?)	
1542	P. hypoleuca	1				
1542	"	1			} also in slick	
1549	Blue-faced	1	SE		Ad.	
1550	Wedgetail	1	SE			
1558	P. hypoleuca	1	SE			
1605	P. hypoleuca	1	SE			
1616	B.W. Petrel	3			on H ₂ O.	
1614	Shear-Pet	2			on H ₂ O	
1620	"	2			on H ₂ O.	
1627	Shear-Pet	1	SW			
1627	Noddy (sp.)	1	NE			
1627	tern sp.	1	SE			
1630	Sooty Slender	1	S			
	B. L. Shear					

G.P.
ST
B.L.
P. hypoleuca
SS
WTS
GF
BB
WTTB
RTTB

dorsal fin

whale ca. 35' long.

Pter 1-1
Shear 1-1
Noddy (sp.) 1-1

GP 1-2

ST 4-7

Bird 1-1

Hyp 9-11

SS 3-3

WTS 5-5

GF 1-1

BB 1-1

WTTB 3-3

RTTB 1-1

B-WP 1-3

S-P 4-6

ET 1-1

BFB 1-1

W-eye 1-2

ST 1-1

Total

41-52

SI-MNH-958e
7-28-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG -- E

Pelagic Bird
Survey

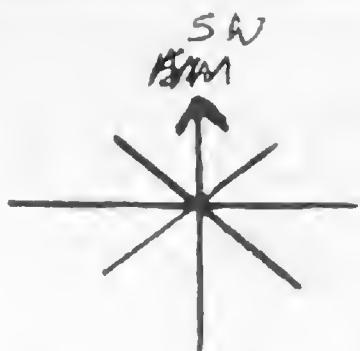
DATE 9 November 1965
Pg. # 3



time	species	#	dir.	hgt.	remarks	loc.
1631	P. hypoleuca	1	ca			
1632	WTTB	1	SW			
1643	P. hypoleuca	1	SW			
1645	WTTB	1	SW			
1652	B/-w. Petrel	1	SE			
1701	shear-Pet	1	S			
1703	Pterodroma sp.	1	NE		very dark back & top of head, very dark & broad leading & trailing underwing borders. ??? JFP size.	
1715	B-W Petrel	1	NE			
1725	WTTB	1	SS			
1733	RTTB	3	ca.			
1805					Apparent Sunset.	

PH 2/2
WTT 3/3
BWP 2/2
S-P- 1
PT 1
RTT- 3/1
12/

17517 16009



Pelagic Bird
Survey
DATE 10 Nov 1965
Pg. # 1

time species # dir. hgt. remarks Noon: 18°10.5'N - 163°46.5'W loc.

0645					Begin observations	Sunrise ~ 0648?
0708	WTTB	1	N			GP 3-4
0720	P. hypoleuca	1	W			White-eye? 1-1
0728	G. Plover	1	0		shot, not found	
0736	Shear-Pet	1				RTTB 1-1
0739	White-eye?	1			heard, not seen	Ptero 2-2
0800	B-f B ooby	1				BFB 2-2
0825	G. Plover	1	0		shot, not found	hypo 6-7
0830	Sooty. Shear	4	SW			WTTB 2-2
0855	Sooty Tern	1	NE			JFP 4-4
0900	Shear-Pet	1	NW			GF 2-2
1005	Storm Pet	1	SE			King 1-1
1007	Sooty Shear	1	SE			S-f 5-6
1009	RTTB	1	0			SS 8-19
1009	WTTB	1	0		Whale	Storm 3-3
1013	Pterodroma	1	SE			B-W 1-1
1015	Sooty Shear	1	S		silver lining	ST 2-4
1025	"	1	S			WTS 1-1
1025	B-F Booby	1			N., dove + sat	
1030	Storm Pet	1	SE			
1048	GF Petrel	1	0			
1054	Sooty Tern	3	NW			
1058	Sooty Shear	4	S			43-59
TF 1103	" Shear	5	S			
1107	Phypoleuca	1	S			Flocks 1-5
1125	G. Plover	2	SW			Total Sightings - 42
1125	G. Frigate	1	NE			
1136	Wedgetail	1	SW			
1208	JF Petrel	1	0			
1210	Storm Pet	1	SE		Leach's type	
1225	P. hypoleuca	1	0			
1230	Shear-Pet	2	E			
1235	P. hypoleuca	1	0			
1237	Shear-Pet	1	E			
1240	G. Frigate	1	0			
1240	P. hypoleuca	2	NE			
1250	SE P	1	0			
1250					Dark Petrel for species 20+	
1302	Shear Pet	1	SE			
1302	JF Petrel	1	E			
1304	Phypoleuca	1	0			
1307	Sooty Shear	1	SE			
1311	Sooty Shear	2	S			
1318	Shear-Pet	1	0			
1322	Pterodroma	1	0			



Pelagic Bird

DATE ^{Survey} 10 November 1965
Pg. # 2

Noon: 18° 10.8' N - 163° 46.5' W

time	species	#	dir.	hgt.	remarks	loc.
1345	BWP	1	○	1-4'		BWP 2/2
1350	"	1	E	1-4'		PH 9/6
1357	P. hypoleuca	1	SW			SS 49/11
1410	Sooty Shear.	6	South			SP 4/4
1419	Storm Petrel	1	NW		black/w. rump.	S-P 13/14
FF 1434	Shear-Petrel	8	}		FF	F 6/3
	Frigate	4				ST 45/2
	Sooty Tern	30				9FP 6/3
1435	Sooty Shear?	1	S			WTT 1
1447	9FP	1	E		} twd flock	PH 4/3
1450	P. hypoleuca	2	E			W 3
1455	P. hypoleuca	1	SE			135/35
1455	Shear-Pet	2	S-SE			142
1458	Storm Pet	1	E			
1458	Storm Pet	1	E			
1459	Sooty/Alcedo	1	S			
1507	9FP	1			on water	
1511	Sooty? Sh	4	S			
1512	"	1	S			
1515	P. hypoleuca	1	E			
1517	Sooty? Sh	1	S			
1524	WTTB	1	NE		Dove 3 times from 75-100 ft, at angle, braking with wings	
1524	Frigate	1	-			
1527	Sooty? Sh	1	S			
1530					→ large school tuna jumping distant	
1535	Shear-Pet	1	E			
1540	Pterodroma	1	E			
FF 1548	Sooty Tern	15			♂	
	Gr Frigate	1			♂	
	Wedge-tail	1				
	JF Petrel	4				
	P. hypoleuca	2				
	Wedge-tail	3				
1604	P. hypoleuca	2			flying after one another - from flock	
F 1631	Slender bill	30	S			
1652	Shear-Pet	1	S			
1658	Sooty-Slender	2	S			
1700	Pterodroma	2	SE		shimmering surface, sat on H ₂ O briefly	
1715	Storm Pet	1	SE	15'		
1730	Pterodroma	1	SE	1-3'	Phoenix A.?, appeared dark on throat, underwings out	
1744	Sooty-Slender	1	S		light not good enough for positive identification	
1745	"	1	S			
1745	Shear-Pet	1	SW			

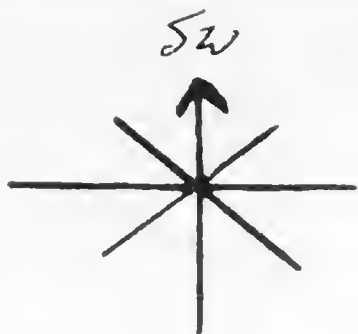


Palagic Bird
Survey

DATE 11 November 1965
Pg. # 1

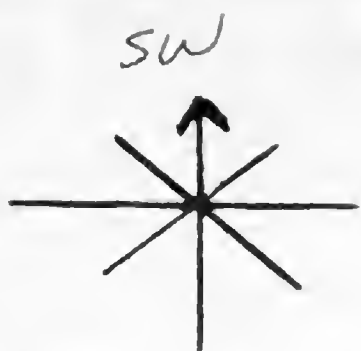
Noon: 15° 55' N - 166° 50.2' W

time	species	#	dir.	hgt.	remarks	loc.
0655					Begin observations	
0713	RTTB	1	⊙		Apparent Sunrise	
0715	Phypoleuca	1	SW		feeding.	
0719	Sooty-Slender	1	S			
0729	Leach's Type	1	SE			RTTB 4-4
TF 0737	Sooty-Slender	20	S			SS 9-104
0743	P. hypoleuca	1	SE			Leach's 5-5
0745	Pale-foot Sh.	1	⊙			hypo 6-7
0750	P. externa	1	SW			Pale 1-1
0754	Pterodroma	1	⊙			externa 1-1
0755	Shear-Petrel	1	E			Pter. 2-2
0800					Whale 15'	S-P 3-3
0804	Sooty-Slender	2	S			GP 1-1
0806					Whale.	WTB 1-1
0810	Leach's Type	1	SE			BB 1-1
TF 0815	Sooty-Slender	15	S			Pin 1-1
0829	P. hypoleuca	1	NE			BWP 1-1
0832	Pterodroma	1				
C 0834	Golden Plover	1	⊙		coll - 9PT	37-133
TF 0839	Slenderbill?	7	SE			
TF 0852	"	19	SE		then milling around in front of rain	
0914	Leach's SP	1	E			
0932	"	1	SE			
0947	"	1	SE			
1000	Storm Petrel	1	S		black/w rump	
1017	Wedgetail	1	W		dark.	
1018	P. hypoleuca	2	SE			
1024	Shear-Petrel	1	W			
1035	Bn Booby	1	S		immature	
1047	Pintail	1	S		♀ imm	
1104	RTTB	1			n H20	
TF 1111	Sooty-Slender	30	S			
1125	Phypoleuca	1	NE			
1127	"	1	S			
1130	Sooty-Slender	1	S			
1140	Shear-Pet	1	E			
1157	RTTB	1	SW			
F 1222	Slenderbill?	14	S			
1223	Bw P	1	S			
1242	RTTB	1	⊙			



Noon: 15°55'N - 166°50.2'W

time	species	#	dir.	hgt.	remarks	loc.
1308	RTTB	1	NW		Pink bloom	
1319	P. hypoleuca	1	NW			RTTB 1
1325	"	1			shot, not found	P.h. 5
1420	Leach's Type	1	↻			L 2
1425	P. externa	1	W			P.e. 1
1427	Wedgetail	1	E			W 1
1428	GF Petrel	1	W			GF 3
1730	P. hypoleuca	1	G			GF 1
1430	G. Frigate	1	G		9 adult.	SS 33/4
1436	Sooty-Slander	1	S			S-P 2
1439	Shear-Pet	1	G			GP 1
1443	GF Petrel	1	NE			PT 1
1512	Shear-Pet	1	N			
1535	GF Petrel	1	SW			51/22
1555	P. hypoleuca	1	SW			
1556	Sooty-Slander	2	S			
TF 1558	"	10	S			
1632	Golden Plover	1			coll - 9 PT	
1737	Sooty-Slander	20	S			
1759	Pterod. sp.	1	S			
1815	P. hypoleuca	1	SE			
1822	Storm Pet	1	SE		Leach's Type	
1830					SUNSET	
1830					CLOSE DAYLIGHT OBSERVATIONS	



NOCTURNA L

time	species	#	dir.	hgt.	remarks	loc.
1830					SUNSET	
1835					BEGIN OBSERVATIONS. WIND NW. 100% cloud cover.	
1853	JFR	1	NE			
1950					Rain squall.	
2010	Tropicbird	1	↻			
2030	Sooty Tern	2	NW		1 seen, 2nd heard (single note)	
2044	" "	1	2		wide awake Note.	
2046	Bird	1			larger than tern - silent	
2050	Sooty Tern?	1			single ^{raspy} note heard.	
2055	Bird	1			silent, - tern size	
2058	"	1			" " " , possibly WTTB	
2112	Sooty Tern	1			calling	
2123	" "	2	N-NW		seen & heard	
2125	" "	1	N-NW		heard in addition to pair from 2123	
2124	" "	2	NW?		adult & immature, both calling	
2135	" "	1			heard calling from S-SE	
2141	" "	2	N-NW		heard & seen, one possibly immature	
2145	" "	3			adult & imm., seen & heard - SE side	
2154	" "	2			heard to SE	
2204	" "	1			2 adults, immature, heard - SE	
2222	" "	2			heard - SE side	
2327	" "	1			heard - SE side	
002437	" "	1			called once - Ad.	
0100	" "	1			Ad. calling	
0106	" "	1			Ad. "	
0153	Bird	1			possibly Shorebird, possibly Sooty (calling)	
0300					cease observations	

JFR 1

Tn - 1

Bird - 3 AM 5

ST - 27

$$\begin{array}{r} 17 \\ \hline 9 \overline{) 153} \\ \underline{63} \end{array}$$

DATE 12 November 1965
Pg. # 1



Noon: 13°-52.2'N, 169°-31.6'W

time	species	#	dir.	hgt.	remarks	loc.
0650					Begin observations	
0712	Sooty/slender bill	1	S-SW			
0712	sooty/slenderbill	1	S			
0725					apparent sunrise (obscured by clouds)	
0726	Bird	1			seen by bridge.	
0745	JFP	1	SE			
0803	shear-pet.	1	S			
0805	P. hypoleuca	1	NE			SS- 154/10
0813	Sooty? Shear	1	S			Bird 1
0817	Shear-pet.	1	SW			JFP 4/4
0819	P. hypoleuca	1	NW			S-P 4/3
TF 0855	Sooty? Shear	8	S			Ph 6/6
0857	P. externa	1	NE			Pe 1
TF 0910	sooty/slenderbill	15	S-SW			GF 4/3
0910	G. Frig.	1	NE		Ad ♂ Chasing Fish.	WTTB 2/2
0910	WTTB	1	CA			PT 1
0919	Pterodroma	1	NE			RTTB 5/4
0953	G. Frigate	2	CA			ST 30/1
0955	RTTB	1	NA			114
TF 1025	Sooty - Shear	20	S			212/34
TF 1135	"	35	S		miceline around ahead	
TF 1155	Sooty/slender	15	S		ship	
TF 1230	Sooty/slender	15	S			
1248	WTTB	1	S			
TF 1255	Sooty/slender	10	S			
TF 1256	"	25	S		Not flying and directionally all the time	
TF 1309	"	10	S		much mulling about.	
1514	P. hypoleuca	1			mulling.	
1547	"	1				
1547	JFP	1				
1610	JFP	1	SE			
1634	P. hypoleuca	1	N			
1645	RTTB	1	NE		SA - calling.	
1716	"	1	NE			
F 1726	Sooty Tern	30	NE			
	shear-pet	2				
1758	frigate (sp.)	1				
	Phylosoma	1	NE			
1818	RTTB	2	NE			
1822	JF Petrel	1			Here, there, everywhere	
1852					sun set cease observations	

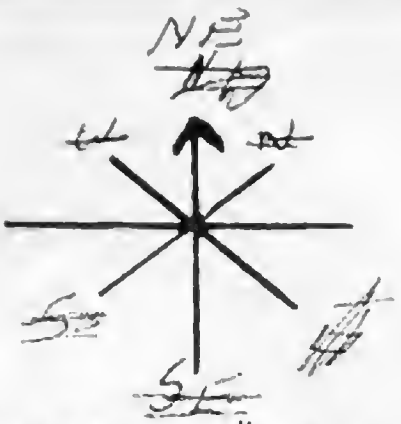


Pelagic Bird Survey
DATE 12 November 1965
Pg. # 1

Nocturnal Observation

time species # dir. hgt. remarks loc.

1853					Begin -	
2019	Sooty T.	2	NE		ad. 3 imm.	
2035	" "	1			heard	
2044	Bird	1				ST - 7
2116	Sooty Tern	2				Bird - 1
2217	Sooty Tern	1				
2222	Sooty Tern	1				
2400					Cease	



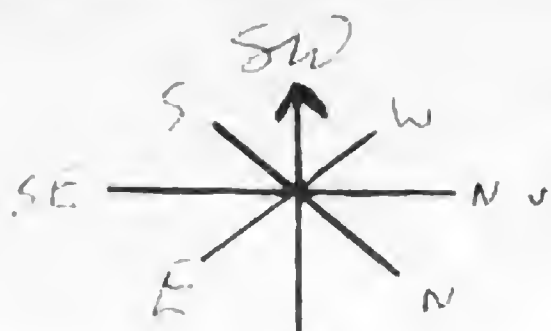
Loc: 13° 13' N - 171° 25' W

time	species	#	dir.	hgt.	remarks	loc.
0730					Sun Up?	
0745	Leach's Type	1	NW			
0746	RTTB	1	NW			
0757	BWP	1	0		coll. JPT - immature, 25 min pickup	
0920	Bl. wing PBT	2	NW			
1035	RTTB	1			coll. PWW immature	all 3 picked up in 1 hour
1050	RTTB	2	G		coll JPT	
1115	RTTB	1	NW			
1158	Sooty Shear	1	E		light underwing	
1159	JFP Petrel	1				
1203	RTTB	2	G		ant # 20	
1230	Sooty Tern	2			Ad & imm	
1240	Sooty/Slender?	1	SE			
1346	Frigate	1	NW	2500'	Ad. ♂ -	
F 1418	Sooty Tern	10	NW			
1427	Shear-Pet	1	W			
1430	Shear-Pet	1	E			
1504	RTTB	1	NE			
1527	Shear-Pet	1	SE			
1545	Pterodroma	1	0			
1550		1			Whale	
1600	P. hypoleuca	1	SE			
1634	"	1	SE			
1643	Shear Pet	1	NE			
FF 1715	Frigate	2				
	Sooty Tern	16				
	Fairy T.	3				
	JFP	9				
	Kermadec P.	1				
1729	Golden Plover	1				
1805	Sooty-slender	1	SE			
1820	Shear-Pet	1	E			
1821	JFP Petrel	1	NE			
1826	Sooty-slender	1	SE			
1855					Sunset - close observation	

L - 1
RTTB 8/6
BWP 3/2
SS 4/4
JFP 1/3
ST 30/3
GP 3/2
S-P 5/5
PT 1
PH 2/2
FT 3/1
KP 1
GP 1
73/28

100+ porpoise & fish
Small - black on top white on bottom.

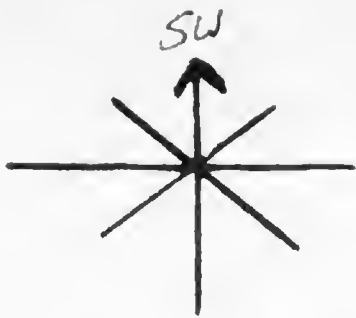
Personel



Loc: 15° 29' N - 170° 09' W

time	species	#	dir.	hgt.	remarks	loc.
0715					Begin observations	
0718					Sunrise	PH 11/9
0729	P. hypoleuca	1	SW			L 6/6
0730	Leach's ?	1	SE			SS 7/7
0730					Change course to NW	GF 3/3
0813	Phygodroma	2	SE			9FP 2/2
0815	Slender bill	1	S		DARK Underwings	RTT 2/2
0816	Storm Petrel	1	SE			S-P 7/4
0830	Frigate	2	Q		feeding.	Bird 1
0837	Sooty-Slender	1	S			PT 3/2
0840	Frigate	1	Q			ST 15/4
0905	Slender bill	1	S		dark underwing.	KP 1
0908	JF Petrel	1	SE			58/41
0910	Phygodroma	1	SE			
0946	Leach's Type	1				
0950	P. hypoleuca	1	NW		on H ₂ O.	
1025	" "	1	N			
1026	JFP	1	Q			
1042	Slender bill?	1	S			
1057	P. hypoleuca	2	NW		one with nearly solid black underwings	
1114	Slender bill	1	S		course change	
1120	Phygodroma	1			flying around 2 on water	
1124	Shear-Pet	2			on water - probably also P. hypoleuca	
1138	Leach's ?	1	SW			
1138	RTTB	1				
1218	P. hypoleuca	1	SE			
1223	" "	1	?			
1234	shearwater	1			sitting on H ₂ O. Shot at with 22. was a	
1245	shear Pet	2	E		sooty-slenderbill.	
1253	Bird	1	?		way off	
1303	P. hypoleuca	1	SW			
1307	Leach's Type	1	NE		dark underwings with small amount of	
1320	Leach's Type	1	NE		white.	
1325	Sooty Tern	5	NW			
1326	Sooty Tern	2	S			
1353	Sooty Tern	4	NW		at least one immature - chasing flying	
1353	Shear-Pet	1	NE		fish.	
1402	"	1	SW			
1424	Shear-Pet	1			distant	
1434	Sooty Tern	4	Q			
1434	Pterodroma	2	Q			
1448	Sooty-Slender	1	S			
1453	RTTB	1			on H ₂ O.	
1517	Shearwater	1	Q			

DATE 14 Nov-65
Pg. # 2



Noon: 15° 29' N - 170° 09' W

time	species	#	dir.	hgt.	remarks	loc.
1519	Slenderbill	1	SE			
1545	Sooty Tern	3				
1545	JFP	1				
1550	Pterod.	1	N			
F 1603	Sooty Tern	12				SS - 5/5
	JFP Petrel	3	S			ST 33/3
	Newell's	1				JFP 7/4
	Slenderbill					PT 3/3
1615	Slenderbill	1	SW			NS 1
1615	Pterodroma	1	N			Ph 3/2
1630	JFP Petrel	1	S			GF 1
1636	Pterodroma	1	SW			FT 1
1642	Slenderbill	1	S			S-P 1
1645	Slenderbill	1	S			I 1
1649	P. hypoleuca	1			~ H ₂ O.	RTT 1
1714	Slenderbill	1	S			
FF 1720	G. Frigate	1			Immature	37/16
	Sooty Tern	18			Fish jumping	
	Fairy Tern	1			at least 1 immature.	
	P. hypoleuca	2				
	Shear-Pet	1				
	Jaeger (sp)	1				
1830	RTTB	1	NW			
1835	JFP	2	SW			
1847					Sunset.	

DATE 15 Nov 1965
Pg. #



Noon: 13° 40' N - 172° 54' W

time species # dir. hgt. remarks loc.

0720					Open observations	
0730					apparent sunrise (behind clouds)	
0745	RTTB	1	U			
0755	P. hypoleuca	1	G			
0805	"	1	W			
0833					10-15 Porpoise NE	
0834	Golden Plover	1	U			
0847	P. Hypoleuca	1	NW			
0849	Shear-Pet	1	N			
0849	"	1	N			
0911	Sooty Tern	1	U		Immature	
0930					change course to NW	
0930	RTTB	1			Diving for food.	
0940	Slenderbill	1	S			
1015	BFB	1			sitting on H ₂ O coll. Juv.	
1015	Frigate	2	G			
1020	Golden Plover	1	G			
1125	Shear-Pet	1	U			
1231	Slender-bill	1	S			
1305	RTTB	1	U			
1315	Slender-bill?	1	S			
1328	RTTB	1			flushed	
1346	Slenderbill	1	S			
1351	Shear-Pet	1	NW			
1354	QFP	1	NW			
1355	Leach's?	1	S			
1400					course change to NE	
1420	sooty/slender	1	U		Note direction NW	
1444	"	1	SW			
1449	"	1	S			
1454	"	1	S			
1516	Sooty Shear	1	S		light underwings	
1521	QFP	1	NW			
1537	Frigate	1			imm., chasing fish	
1546	Sooty/Slender	1	S			
1558	P. hypoleuca	1	N			
1608	Sooty/Slender	1	S			
1611	"	2	S			
1620	"	1	S			
1631	"	1	S			
1637	"	1	S			
1647	RTTB	1			on water	
1657	P. hypoleuca	1	U			
1710	RTTB	1			on H ₂ O collected - PWW	ship underway
1715	Slender-bill	1	S		dark underwing.	1920
1906					SUNSET	

DATE 16 Nov 65
Pg. # 1



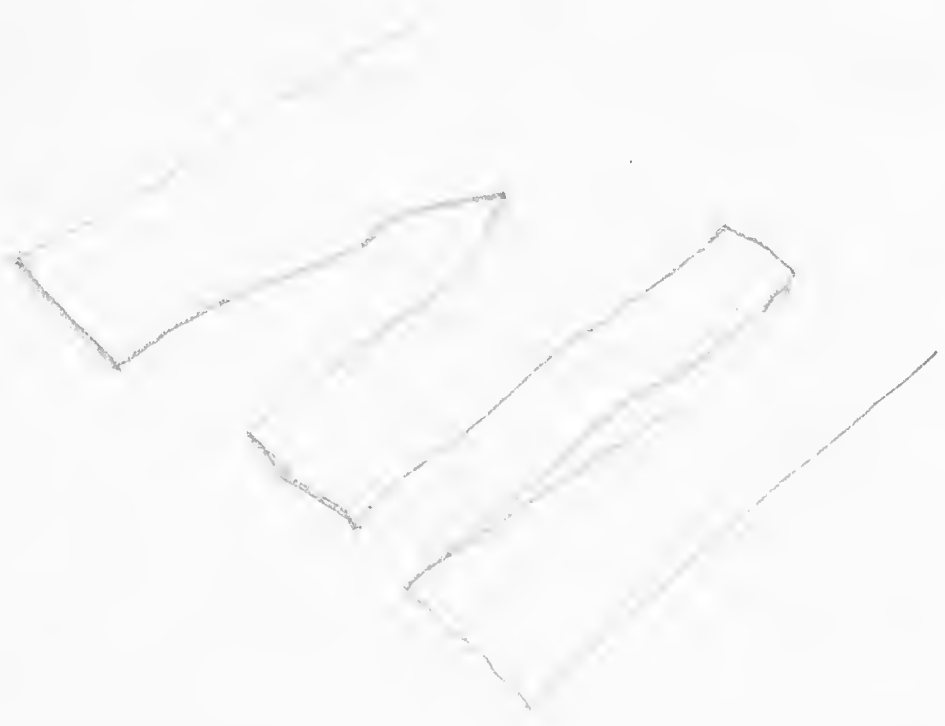
time species # dir. hgt. remarks Noon: 16-04N, 171-33.5W loc.

0735					Begin observations
0741	Shear Pet	2	S		S/SB ?
0749	Slenderbill?	1	S		
0802	JFP	1	W		
0807	Slenderbill	2	SW		
0809	Slenderbill	1	S		
0815	Slenderbill	1	S		
0816	Slenderbill	1	S		
0817	Leach's Tyto	1	W		
0820	Slenderbill	1	S		
0822	Red-footed Boob	1	NE		Subadult.
0842	Slenderbill	1	S		
0855	Shear-Pet.	1	N		
0859	JFP	1	NW		
0903	Shear-Pet	1	SE		
0914	RTTB	1	S		
0919	Shear-Pet	1	S		
0922	Sooty/Slender	1	S		
0927	"	1	S		
0940	G. Frigate	1	S		
0947	G. Frigate	3	S		2 appeared to be chasing fish
1002	BLARD	1	Brd?		2 f's
1034	Sooty-Slender	1	S		
1050	Leach's	1	NE		
1104	Slenderbill	1	S		
1124	"	1	S		
1127	Leach's Z	1	SW		
1130	Slenderbill	1	S		
1132	"	1	S		
1200	Phypoleuca	1	NE		
1210	Shear-Pet	1	W		
1227	Short-eared Owl	1	NE		Seen clearly at 50 yds. Buffy wing patches. PWW.
1227	Frigate sp.	1	G		
1240	Slenderbill	1	S		
1257	Slenderbill	1	S		
1320	"	1	SE		
1325	Frigate	1	S		
1326	Slenderbill	1	S		
1405	"	1	S		
1450	Lea. Bo	1	S		Passing through misty squall
1500	JFP	1	SW		
1517					whale (ca 15')
1612	G Frigate	1	SE		Adult ♂
1658	B-W Petrel	1	SE		

SP 6/5
S/SB 20/19
JFP 3/3
L 4/4
RTTB 1
PT 1
GF 6/4
Bird 1
Ph 1
SEO 1
BWP 1

46/42

~~Shear-Pet~~ ~~RTTB~~ ~~Shear-Pet~~ ~~RTTB~~ ~~Shear-Pet~~ ~~RTTB~~





DATE 16 NOV
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1720	Slenderbill	1	S			
1727	shear-pet	1	NW			
1744	G. Frigate	1	Ø			
1800	shear pet	1	N			
1826	wt				whale	
1850					apparent sunset	

S/SB 1
SP - 2/2
GF - 1

NW



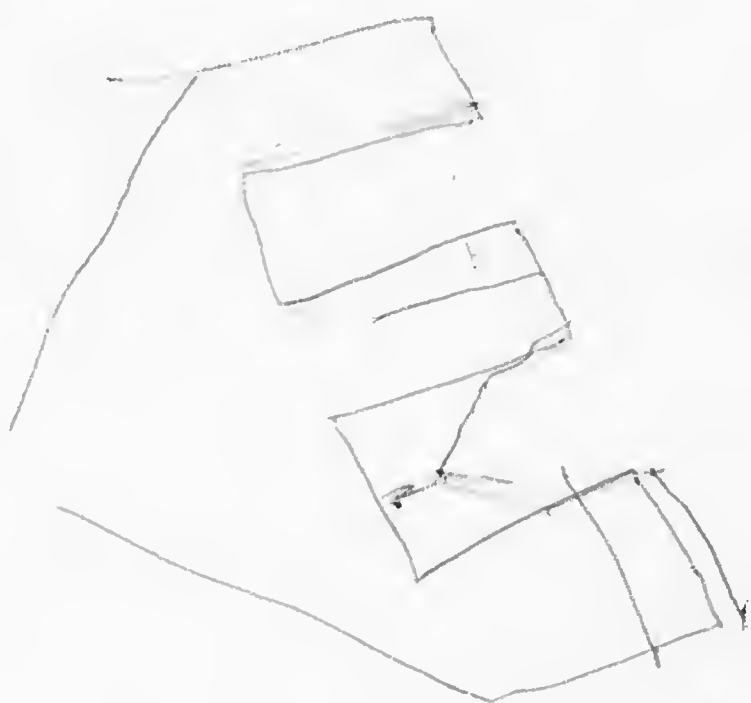
Pelagic Bird Survey

DATE 17 Nov. 1965
Pg. # 1

Noon - 15-10 N, 174-14 W

time	species	#	dir.	hgt.	remarks	loc.
0726					begin	
0727	RTTB	1	0			
0729	Frigate	1	0			
0730	Frigate				SUNRISE	
0738	Sooty Shear	1	S		light wing patches	
0740	Sooty/Slender	3	E			
0745	" "	1	SE			
0747	" "	1	SE			
0749	" "	3	S			
0749	RTTB	1				
0755	Bird Bird	1			sitting on H ₂ O	
0755	Shear-Pet	1	0			
0757	Sooty Tern	1	N		Imm.	
0802	JFP	1	CR			at present ship's
0805	Slenderbill	1	S			Course is NW
0806	"	2	S		G. Frig. 1-2	
0809	"	4	S		JFP 1-1	
0815	"	1	S		ST 1-1	
0815	"	1	S			
TF 0831	"	5	S		SS 30-165	
TF 0842	"	6	S		Bird 3-3	
TF 0849	"	7	S		RTTB 4-5	
0851	"	1	S		frig 1-1	
0852	"	1	S		Plow 2-2	
0906	"	3	S			
0910	"	3	S			
0922	Bird (B.)	1			observed by bridge.	
0925	Slenderbill	3	S		S-P. 1-1	
0927	RTTB	2	N			
0949	Slenderbill	1	S			44-181 181
TF 0953	Slenderbill	15	S			
1005	"	7	S			
1005	"	3	S			
1008	G-Frigate	2	0		184 f	
1008	G. Plow	1	0			
F 1015	Sooty-Slender	10	S			
1020	"	2	S			
F 1028	"	6	S			
1036	"	2	S			
TF 1043	"	25	S			
TF 1045	"	40	S			
1045	"	1	S			
1046	RTTB	1	0			
TF 1101	Sooty-Slender	9	S			
1113	Bird	1			Brown Booby or common Noddy riding a log	
1122	Frigate	1	0		flushed from H ₂ O	
1135	RTTB	1				
1136	G. Plow	1	0			

$$\begin{array}{r} 240000 \\ 240000 \\ \hline 480000 \end{array}$$



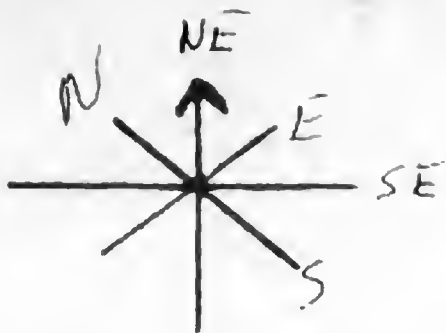


Pelagic Bird Survey

DATE 17 November 1965
Pg. # 2

Noon: 15-10 N, 174-14 W

	time	species	#	dir.	hgt.	remarks	loc.
TF	1149	Slenderbill	46	S			
	1200	Slenderbill	2	S			
TF	1205	Slenderbill	20	S			
	1230	Slenderbill	3	S			
	1245					changed course NE	
	1301	RTTB	1	NE			
	1301	P. hypoleuca	1	NE			
	1301	RTTB	1			on H ₂ O	
	1301	Slenderbill	2	S			
	1307	"	4	S			SS-37-272
	1316	Frigate, br.	1	SE			RTTB 3-3
	1318	Slenderbill	2	S			hypo 2-2
	1318	P. hypoleuca	1	NE			frigate 1-1
TF	1322	Slenderbill	6	S			Skua 1-1
	1328	"	2	S			
	1329	"	4	S			
	1329	"	1	S			
	1330	"	3	S			
	1331	"	1	S			44-279
	1340	RTTB	1			on H ₂ O	Flock-16-224
F	1343	Slenderbill	7	S			
F	1415	"	5	S			
F	1426	"	10	S			
	1442	"	3	S			
	1446	"	1	S			
	1446	Skua	1	NE			
F	1450	Slenderbill	12	S			
	1455	Slenderbill	3	S			
	1456	Slenderbill	4	S			
F	1456	Slenderbill	7	S			278
	1458	Slenderbill	2	S			165
F	1458	Slenderbill	9	S			443
	1502	"	1	S			
F	1510	"	16	S			
F	1512	"	7	S			
F	1513	"	8	S			104
	1520	"	4	S			128
	1521	"	1	S			46
F	1522	"	12	S			278
F	1528	"	28	S			
E	1530	"	6	S			
	1532	"	3	S			
F	1535	"	24	S			
	1540	"	1	S			
	1550	"	1	S			



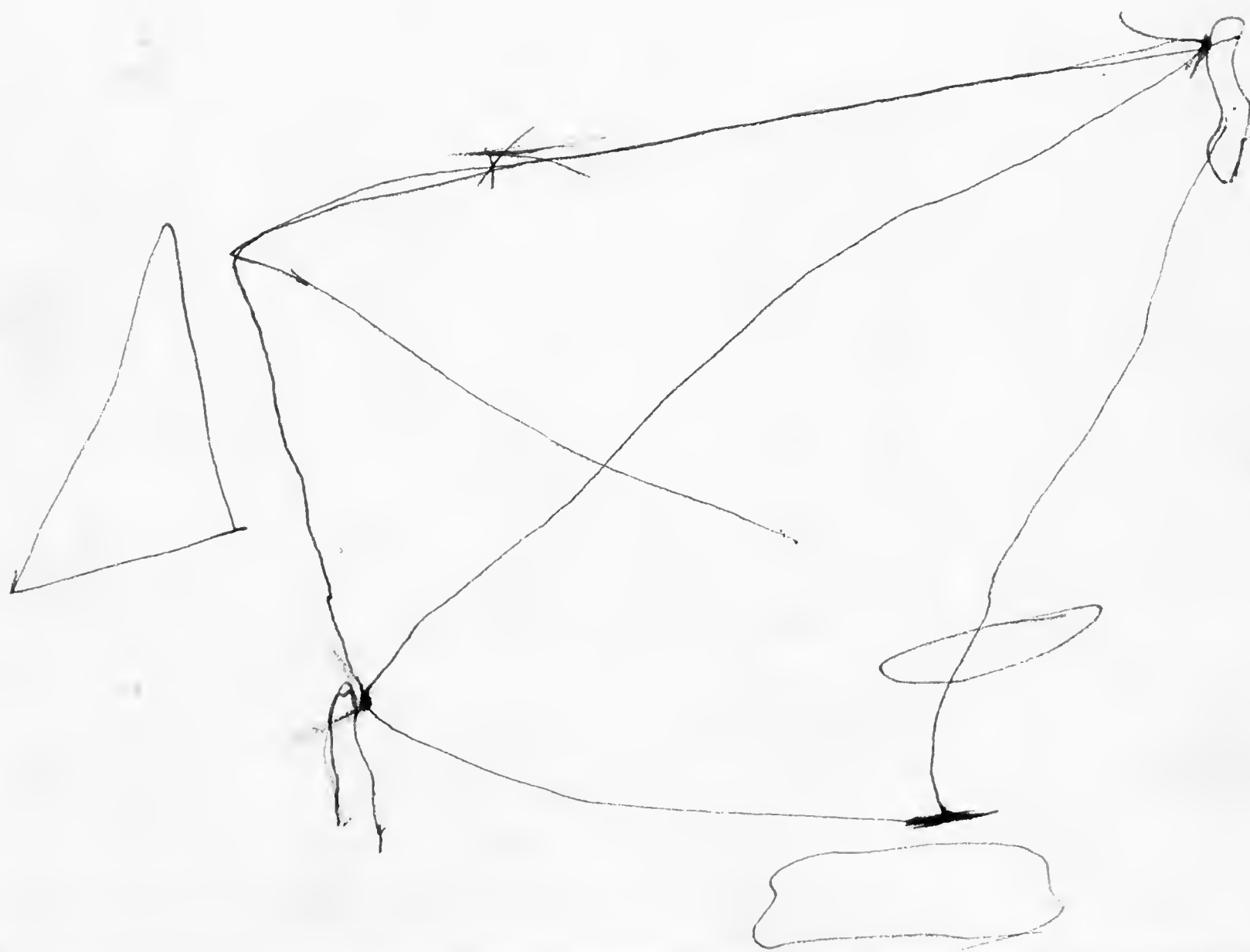
Pacific Bird Survey

DATE 17 Nov 65
Pg. # 3

Noon: 15-10 N, 174-14 W

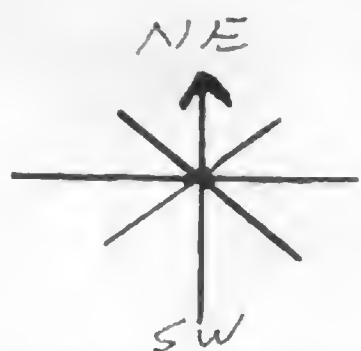
time	species	#	dir.	hgt.	remarks	loc.
1540	Slenderbill	2	S			
F 1548	Slenderbill	27	S		SS 38-397	
F 1550	Slenderbill	5	S		frig 1-1	
F 1552	Slenderbill	6	S		RTTB 2-2	
F 1554	Slenderbill	10	S		BIP 1-1	
1555	Frigate	1	G		ST 1-1	
F 1556	Slenderbill	19	S		Pter 1-1	
F 1600	Slenderbill	25	S			
F 1600	Slenderbill	11	S		one sitting in H ₂ O	
F 1604	Slenderbill	5	S		403/404	
F 1604	Slenderbill	14	S			
F 1606	Slenderbill	30	S			
1608	Slenderbill	2	S			
1611	RTTB	1	NE			
1615	Bonin Isp	1	NW		Head contrasting with neck, eye spot black	
1617	Slenderbill	2	S			
1620	Pterodroma	1	S		158	
F 1623	Slenderbill	4	S			
F 1623	Slenderbill	11	S			
1625	Slenderbill	2	S			
F 1625	Slenderbill	15	S			
F 1631	Slenderbill	6	S			
1632	Slenderbill	3	S			
F 1635	Slenderbill	4	S			
F 1636	Slenderbill	8	S			
1636	Slenderbill	2	S			
1641	Slenderbill	1	S		214	
F 1645	Slenderbill	17	S		134	
F 1646	"	15	S		49	
1646	"	2	"		792	
F 1648	"	15	S			
1650	"	3	"			
1652	"	3	"			
F 1657	"	24	"			
F 1659	"	8	"			
F 1700	"	12	"			
F 1706	"	33	"			
1706	RTTB	1	↻			
F 1706	Slenderbill	8	S			
1709	"	3	S			
F 1711	"	30	S			
F 1715	"	6	S			
1715	Sooty Tern	1	↻		adult	
1717	Slenderbill	2	S			

21
397
272
145
879



DATE 17 Nov. 1965

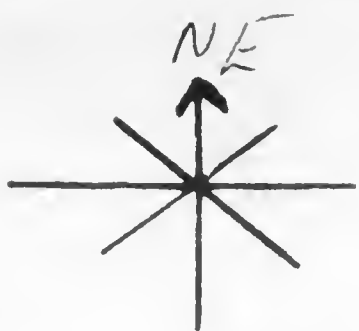
Pg. # 4



Norm: 15-10 N, 174-14 W

	time	species	#	dir.	hgt.	remarks	loc.
F	1728	Slenderbill	21	S			
	1740	"	2	S			
	1742	"	1	S			
F	1745	"	12	S			
F	1745	"	28	S			
	1745	"	4	S			
F	1745	"	4	S			
F	1747	"	20	"			
F	1748	"	10	"			
F	1749	"	24	"			
F	1752	"	28	"			
	1755	"	4	"			
	1755	"	2	"			
	1758	Frigate, br.	1	↻		♀	
	1756	slenderbill	2	South			
	1757	"	3	"			
F	1759	"	40	"			
F	1804	"	20	"			
F	1807	"	8	"			
F	1807	Slenderbill	6	S			
F	1809	Slenderbill	40	S			
F	1810	Slenderbill	7	S			
	1816	Phygodroma	1	W			
F	1816	Slenderbill	7	S			
F	1820	Slenderbill	16	S			
F	1821	Slenderbill	9	S			
F	1823	Slenderbill	6	S			
F	1825	Slenderbill	14	S			
F	1830	Slenderbill	7	S			
	1830	Sooty Tern	1	W			
	1831	Slenderbill	2	S			
F	1832	Slenderbill	30	S			
F	1836	Slenderbill	10	S			
	1839	Slenderbill	4	S			
F	1840	Slenderbill	8	S			
F	1843	Slenderbill	13	S			
	1845	Slenderbill	3	S			
	1846	Slenderbill	3	S			
F	1850	Slenderbill	10	S			
F	1855	Slenderbill	5	S			
	1900	Sunset (observed).					

SB-435 / 37
GF-1
Ph-1
ST-1



Pelagic Bird Survey.

DATE 17 November 1965

Pg. # 1

Nocturnal Observation.

time	species	#	dir.	hgt.	remarks	loc.
1900					Begin	
1911	Slenderbill	3	S			
F 1914	Slenderbill	5	S			
1916	G. Plover	1	N		Landed on deck.	
2230					end observations	



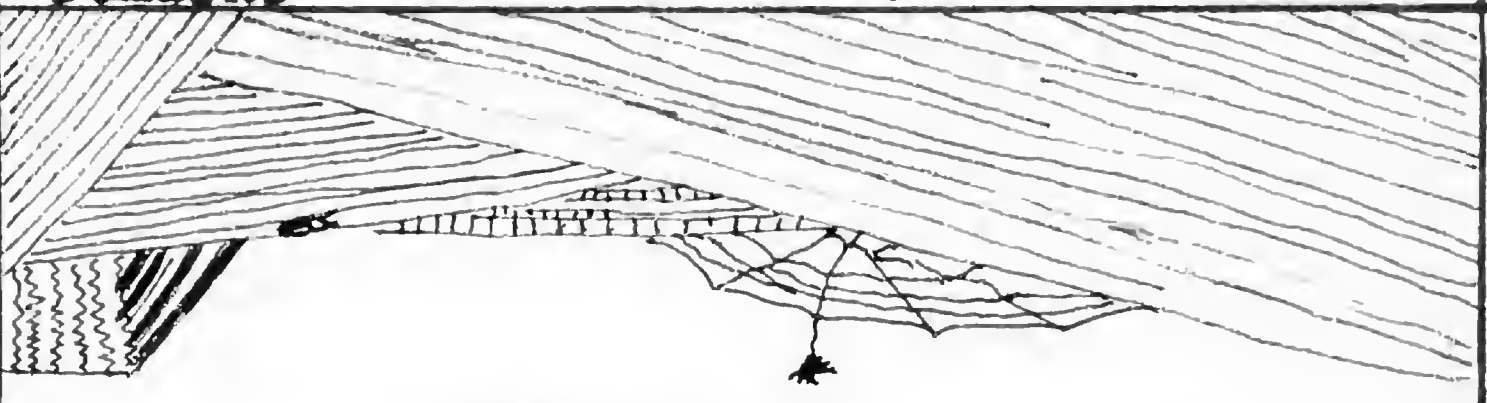
Noon - 16-45 N, 171-31 W

time	species	#	dir.	hgt.	remarks	loc.
0725					BEGIN	
0728	slenderbill	9	S			
30	"	2	"			
35	"	5	"			
36	"	2	"			
0740	"	1	"			
0740					approximate sunrise	
F 0743	slenderbill	7	S			
F 0746	"	6	S			
F 47	"	5	"			
0750	"	3	"			SB - 139/3.3
52	"	3	"			RTTB - 1
F 55	"	7	"			S-P 6/5
57	"	4	"			RTTB 2/2
58	"	2	S			Bird - 1
0820	"	4	S			Pe - 1
0822	"	3	S			CF 2/1
0825	"	3	S			RP 1
0830	B. F Booby	1	N			
0845	Shear-Pet	1			Immature collected PW	153/44
0858	RTTB	1				
0912	Shear-Pet	2	S			
0913	Slenderbill	1	S			
0916	Slenderbill	3	S			flocks: 9-90
0924	"	1	S			
0926	"	2	"			
0929	Shear-Pet	1	N?			
0930	Slenderbill	1	S			
0936	Bird	1				
0938	Slenderbill	1	S		Horizon; appeared white - Tropicbird or Booby	
0946	"	1	S			
1020	RTTB	1	NE		flushed from H ₂ O	
1030	Slenderbill	3	S			
1033	Slenderbill	1	S			
F 1037	"	6	S			
1041	"	1	S			
1043	"	1	S			
1108	Shearwater sp.	1	E		Wedgetail or Newell's, light below, appeared brownish above, straight flight with intermittent flapping and gliding 1-2' above water	
1115	Petrel	1	E			
1143	Frigatebird	2	E			
1152	Slenderbill	3	S			
1153	Kermadec P	1	NE			
F 1157	Slenderbill	8	S			
1156	"	2	S			
1205	"	3	S			
1212	"	1	S			
1251	"	2	S			
1256	"	1	S		one sitting on H ₂ O	
1310	Shear-Petrel	1	N			
F 1315	Slenderbill	20	S			
F 1316	Slenderbill	6	S			
F 1320	Slenderbill	15	S			

1-2-3-4-5-6-7-8-9-10-11-12
X ~~4-5-6~~ →

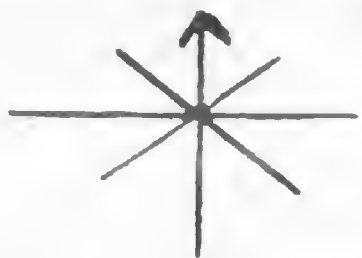


Noon: 16-45 N, 171-31 W

	time	species	#	dir.	hgt.	remarks	loc.
	1325	Shear-Pt	1	NW			
	1326	Slenderbill	2	S			
	1327	Booby (sp)	1	SW			
	1331	Slenderbill	3	S			
	1338	C. Noddy	1	S			
	1359	Slenderbill	3	S			
F	1403	"	55	"			
F	1403	"	7	"			
F	1406	"	15	"			
F	1409	"	17	S			
F	13	"	6	110°		ENNUI	S-P-1
F	20	"	75	S			SB- 398/40
F	22	"	8	"			Booby-1
F	1425	"	3	"			CN-1
F	1431	"	25	"			BLWP-1
P	33	"	2	S			SY-1
P	39	"	18	"			LSP-1
P	39	"	10	"			RTT - 1
F	45	"	38	"			T1-1
F	55	"	33	"			
F	1502	"	25	"			
	1505	"	1	"		288	
	1506	P. L. Petrel	1	—		adult	
	1508	Sooty Tern	1	N			406/49
P	1513	Slenderbill	5	S			
	1517	"	1	S			
	25	"	12	"			
F	26	"	18	"			
F	32	"	5	"		329	
	34	Seachess?	1	?			
F	34	Slenderbill	4	S			
F	47	"	6	"			
F	53	"	17	"			
	53	RTTB	1			on H ₂ O	
	56	Slenderbill	1	S			
	1609	"	1	"			
	1615	"	1	"			
F	1618	"	10	"			
	1624	"	2	"			
F	1631	"	4	"			
	1631	Sooty Shear	1	S			
	1639	Slenderbill	1				
	1639					384	
	1642	Tropicbird	1				
	1644	Slenderbill	2	S			
	1644	Sooty Shear	1	S			
	1648	Slenderbill	1	S			
	1650	Slenderbill	1	S			
	1703	Slenderbill	3	S			
F	1705	Slenderbill	6	S			

flocks - 22 (368)

Definite difference in underwing
100% porpoise, 2 ~~to 3~~ ~~seen~~
on water - ~~later~~ ~~seen~~
bright flashing
Heading south. Brown on
Top - gray underneath two
time.



Pelagic Bird Survey

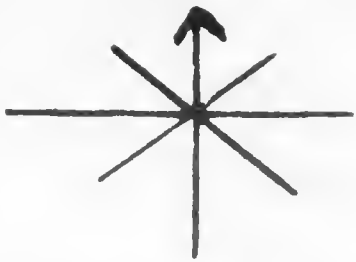
DATE 18 November 1965

Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
F 1709	Slenderbill	10	S			
1713	Slenderbill	3	S			
F 1715	Slenderbill	6	S			
1715	Slenderbill	2	S			
1719	Slenderbill	1	S			
F 1724	"	10	S			SB - 219/35
F 1730	"	9	S			RFB - 1
F 1732	Slenderbill	7	S			L - 1
1732	Slenderbill	1				WNP - 1
1733	Slenderbill	4	S			222/38
1734	Slenderbill	2	S			
1740	Slenderbill	2	S			flocks - 12 (165)
F 1742	Slenderbill	10	S			
1743	Slenderbill	6				
F 1743	Slenderbill	35	S			
1748	Red-foot B	1	SW		Subadult.	
1749	Slenderbill	1	S			
1751	Slenderbill	4	S			
1752	Slenderbill	4	S			
1753	Slenderbill	3	S			
1754	Leach's Type	1	SW			
F 1755	Slenderbill	40	S			
1756	Slenderbill	1	S			
F 1759	Slenderbill	10	S			
1800	Slenderbill	2	S			
F 1802	Slenderbill	15	S			
1804	Slenderbill	3	S			
F 1805	Slenderbill	7	S			
1808	Slenderbill	1	S			
1812	Slenderbill	3	S			
1813	Slenderbill	2	S			
1815	Slenderbill	3	S			
1816	Slenderbill	2	S			
1819	Slenderbill	4	S			
1820	Slenderbill	2	S			
1823	W-n Petrel	1	SW			
1825	Slenderbill	1	S			
F 1825	Slenderbill	6	S			
1827	Slenderbill	3	S			

DATE 18 November 1965

Pg. # 4



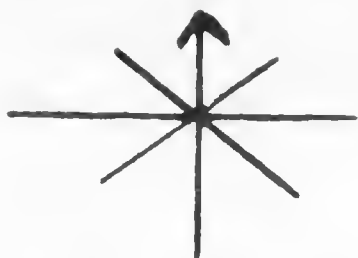
time species # dir. hgt. remarks Noon: 16-45 N, 171-31 W loc.

F	1829	Slenderbill	13	S		
F	1831	Slenderbill	5	S		
	1832	Slenderbill	1	S		
	1833	Slenderbill	1	S		
	1841	"	4	S		
F	1843	"	23	"		
F	1845	"	4	"		
	1848	"	2			
	1854	"	1			
	1855					

Sun down?

56/9

flocks - 4 (47)



Pelagic Bird Survey

DATE 18 Nov. 1965

Pg. # 1

NOCTURNAL OBSERV.

time species # dir. hgt. remarks loc.

2000

2050

0045

0345

Bird

Leach's

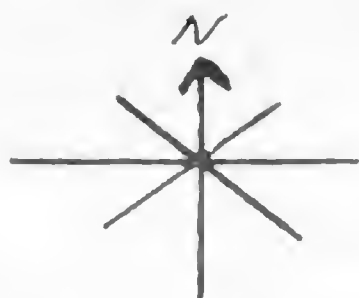
St. Petrel

1

Begin observ.: The glow from Johnston I. is visible a little east of present course. heard. Note not identified

attracted by lights - caught in net.

and observations



Noon: 17-33^N, 169-33 W

loc.

time	species	#	dir.	hgt.	remarks
0723					Begin observations
0728					Summary
0751	Slenderbill	2	S		
0805	Slenderbill	1	S		
0825	Slenderbill	1	S		
0833	Shear	1	S		
0833	Slenderbill	1	S		
0835	Red-foot Booby	1	S		collected PW - Subadult.
F 0859	Slenderbill	5	S		
F 0925	Slenderbill	8	S		
0931	Slenderbill	1	S		
0934	Slenderbill	1	S		
F 0938	Slenderbill	13	S		
F 0940	Slenderbill	5	S		
0944	P. externa	1	S		
0948	J.F. Petrel	1	E		
F 0950	Slenderbill	6	S		
0955	Slenderbill	1	S		
0956	JFP Petrel	1	SW		
1005	Slenderbill	1	S		
1019	P. externa	1	SW		
1022	Slenderbill	3	SE		
1026	"	1	S-SE		
1031	"	1	S		
1031	RTTB	1			sitting on H ₂ O
1039	Vermader P.	1	S		
1050	Slenderbill	1	S		
1106	Frigate, Gr.	1	E		
F 1145	Slenderbill	5			
1156	P. externa	1	W		
1217	Sooty/Slender	3	SE		
1225	" "	4	SE		
1230	" "	1	SE		
1241	Petrel	1			flushed off H ₂ O
1250	Storm Pet	1	SE		
1253	Sooty/Slender	4	SE		crowd above, lights below
1302	Bird	1	E		
F 1315	JFP	5			2 on H ₂ O (1 of 5 coll.); 3 sat together while pickup made, chased afterward
1315	Leach's	3			
1315	Sooty/Slender	4	S		
F 1320	" "	1	S		ship underway after pickup
1405	P. hypoleuca	1	?		with 2 P. externa (1 coll.) JFP of 1315
1448	Slenderbill	1	S		

SB-86/25

S-1

RFB-1

Pe - 4/4

JFP - 7/3

RTTB-1

KP-1

GF-1

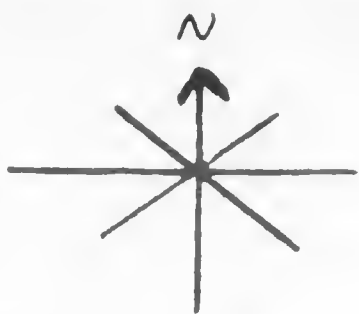
Storm Pet - 1

Bird - 1

L - 3/1

Ph - 1

108/41



PBS

DATE 19 Nov 1965

Pg. #2

Noon: 12-33 N, 169-33 W

time species # dir. hgt. remarks loc.

F	1505	Slenderbill	15	S			
	1525	RTTB	2	☉		often sitting on H ₂ O	
	1545	RTTB	1			sit on H ₂ O - very possibly one of above 2.	
	1634	Slenderbill	2	S			
	1636	Slenderbill	1	S			
	1653	P. hypoleuca	1	ND			
	1658	Shear-Petrel	1	NE			
	1742	" "	1	S			
	1742	Sooty/Slender	1	S			
	1744	" "	2	SE			
	1749	BFB	1	N		adult(?) stuck head in H ₂ O. Drinking?	
	1753	P. hypoleuca	1	☉			
	1807	Slenderbill	1	S			
	1814	"	1				
	1840					Sunset	

SB - 23/7

RTTB 3/2

PH - 2/2

S-P - 2/2

BFB - 1

31/14



Pelagic Bird Survey

DATE 20 Nov 65

Pg. # 1

Noon = 20-15N, 167-47 W

time species # dir. hgt. remarks loc.

	0712				begin	
	0716	Slenderbill	1	SE		
	0725	Slenderbill			SUNRISE	
	0729	Slenderbill	1	SE		
	0732	"	1	SE		
	0737	RTTB	2	SE		
F	0741	Slenderbill	1	S		
	0742	"	7	SE		
	0747	9FP	1	E	WHALE!	
	0751					
	0755	Slenderbill	1	SE		
	0758	Slenderbill	1	S		
F	0800	sooty/slender	6	SE		
	0803	"	1	SE		
	0804	Wedgetail	1	NE		
	0808	JFP	1	SE		
	0813	Slenderbill	1	S		
	0820	B-F Albatross	1	SE	white rump	
	0829	sooty/slender	2	S		
	0840				whale	
	0842	JF Petrel	1	E		
	0852				another 2 whales (total 3)	
	0856	Slenderbill	2	S	(2 other whales)	
	0903	Shear Pet	1	SE		
	0905	P. externa	1	NE		
	0910	Slenderbill	1	S		
	0915	Slenderbill	2	S		
	0918	P. externa	1	NE		
	0919	Slenderbill	2	S		
	0920	Slenderbill	2	S		
	0923	Slenderbill	1	S		
F	0925	Slenderbill	8	S		
F	0926	Slenderbill	6	S		
	0930	Slenderbill	1	S		
	0935	B-F Albatross	1			
	0936	Slenderbill	3	S		
	0942	Slenderbill	1	S		
	0952	Slenderbill	2	S		
	1000	Frigate sp.	1	SE		
	1005	Slender	2	SE		
	1015	RTTB	1	S		
	1025	Frigate	1	S		
	1028	JFP	1	S		
	1038	Slenderbill	1	S		
	1050					
	1050					

SB 58/26
RTTB 3/2
9FP 4/4
W 1
BFA 2
S-D 1
Pe 2
GF 2
73/40

All dark; did not return after feeding on noon garbage

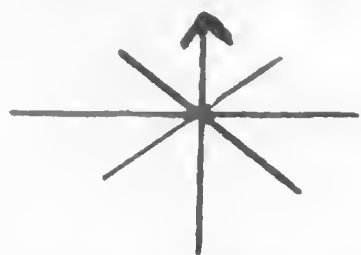




Pelagic Bird Survey

DATE 20 Nov 65
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1045	JFP	1	E			JFP 18/4
1057	Slenderbill	3	SE			SB 51/21
1103	BWP	1	W			BWP 7/2
1113	Pterodroma	1	Ø			Pt 5/5
1113	Slenderbill	1	ESE			Pt 7/3
1120	"	2	S			PFS 2/2
1122	Pterodroma	1	SW			WNP-1
1143	Slenderbill	1	?			L-1
1146	"	1	S			PA 2/1
1158	"	1	S			NZS-1
1205	Pale-foot shear	1	NE			2
1208	Black-w. Petrel	1	SE			S-P-2
1228	Slenderbill	2	S			ST-7
1240	White-neck P.	1	SE			
1245	Black-b. Albatross	1			In addition to one which has been following ship	
F 1245	Slenderbill	10	S			99 98/41
1252	"	3	S			
1320	Slenderbill	1	S			
1324	Slenderbill	2	S			
1326	Slenderbill	2	S			
1330	Slenderbill	1	S			
1345	Slenderbill	3	S			
1352	Slenderbill	1	S			
1425	Zenaidura	1	NE			
1426	JFP	1	E			
1435	P. hypoleuca	2	E			
F 1452	Slenderbill	5	SE			
1521	P. externa	1	N			
1541	"	1	W			
1544	Slenderbill	1				
1600	JFP	1	Ø		over porpoise	
1600					4-5 lg (10') all brownish	
1605	Slenderbill	1	S		Porpoise, often just under surface	
1612	"	2	S			
1612	P. externa	1	NE			
1615	Mottled P.	1	SW			
F 1622	Slenderbill	7	S			
1622	Pale-foot shear	1	NE			
1625	Shearwater	1	E		Not well observed: Larger than wedgetail? darker brown above?	
1630	P. externa	1	Ø		light below.	
1630	N.Z. Shearw.	1			sitting on H ₂ O - flushed	
1654	Pterodroma sp.	1	?			
1654	Slenderbill	1	S			
1658	shear-pet	1	NW			
FF 1710	Sooty Tern	7			actively feeding. Fish jumping. Petrel	
	JFP Petrel.	15±2			low to water.	
	Pterodroma	5±1				



Norm: 20-15 N, 162-47 W

time	species	#	dir.	hgt.	remarks	loc.
1733	Slenderbill	4	J			
1733	B.f. Albatross	1	N		damaged foot	
1745	IFP	1	SE			
1750	Kermadec	1	SE		light phase	
1754	Pterodroma	1	SE			
1756	Bonin Is.	1	S			
1756	Slenderbill	2	S			
1811	"	3				
1815	Leach's?	1	N		black dividing line in white wing seen.	
F 1815	P. externa	1	E			
1821	"	1				
1821	P. hypoleuca	1				
1825					SUNSET	

SB - 9/3

BFA - 1

IFP - 1

KP - 1

PT - 1

BIP - 1

L - 1

Pe - 12/2

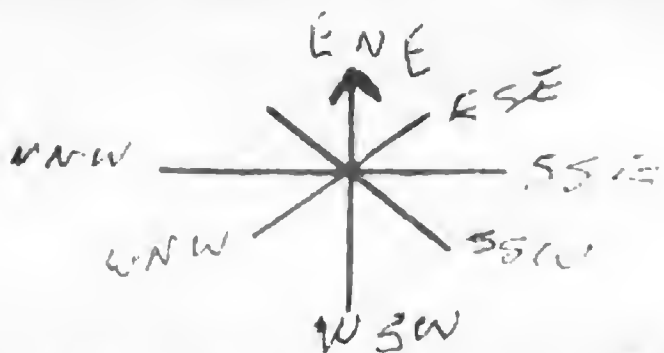
PA - 1

28/12

73 40

99 41

200/93

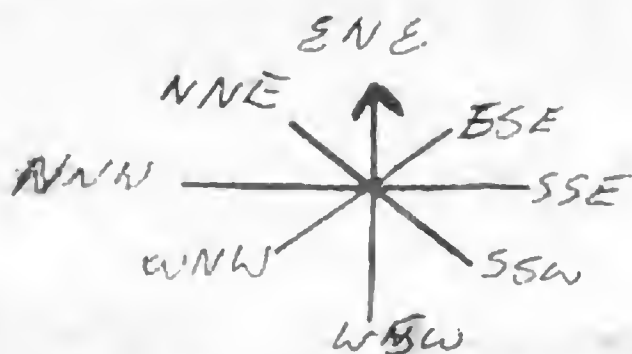


DATE 21 Nov. 65
Pg. # 1

Noon: 20-30 N, 164-24 W

time	species	#	dir.	hgt.	remarks	loc.
0712					begin	
0713	B.F. Albat	1			following ship, white rump, 3	
0715	seagull	0			under-tail	
0721	Slenderbill	1	SE		sunrise	
0725	Slenderbill	3	S			
0725	Petrel	1	NA		close look - dark underwings, dark	
0726	Slenderbill	1	S		sunrise down to chest white abdomen.	
0727	JFPetrel	1	S		apparent black P-W	
0730	JFPetrel	4	N			
0731	JFPetrel	2	N			
0731	Slenderbill	1	S			
0731	Kermadec?	1	E			
0737	Slenderbill	1	S		smoky, light underwings	
0740	Kermadec?	1	S			
0743	Brown-Pet	1	E			
0749	JFPetrel	2	E			
0754	Slenderbill	1	S			
0804	Pterodroma	1	NW			
0809	"	1	W			
0813	"	1	SW			
0816	P. hypoleuca	1	SW		little black under wing, gray head	
F 0821	"	6				
F 0821	JFP	4				
F 0828	P. hypoleuca	2	SW			
	JFP	4	"			
0832	Slenderbill	1	S			
32	P. Hypo	2	SW			
33	P. externa	1	"			
F 35	JFP	3	"			
35	P. hypoleuca	2	"			
35	Sooty slender	3	S			
37	JFP	1	SW			
41	Pterodroma	2	NW			
46	Black wing	1	W			
46	JFP	1				
49	"	1				
48	Slenderbill	1	S			
53	JFP	4				
0858	Pterodroma	2				
0901	P. externa	1				
0901	P. hypoleuca	1				
0901	JFP	1				
0906	"	1				
0908	Slenderbill	2				
0909	P. externa	2				
0911	Black wing list	1	SW			
0913	Kermadec	1	NW		informed	

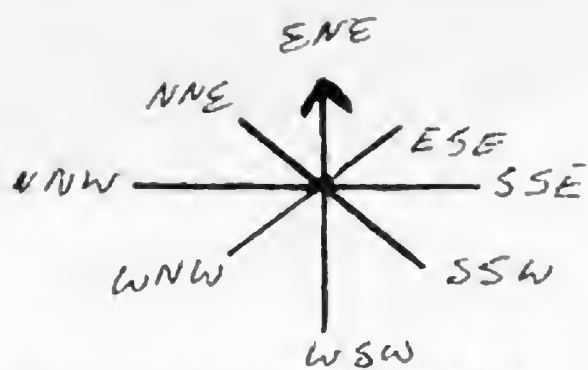
BFA-1
SB- 15/10
PT 9/7
JFP 31/10
L 1
S-P-1
PK- 14/6
Pe - 4/3
BWP- 2/2
KP-1
79/42



DATE 21 Nov 1965
Pg. # 2

Neon: 20-30 N, 164-24 W

time	species	#	dir.	hgt.	remarks	loc.
0818	JFP	1				
0924	Leuco	1	WNW			
0928	Slenderbill	1	S			
0928	JFP	1				JFP 38/23
0930	Pterodroma	1	NNW			L 1
0931	Bl. wing Pet	1				SB 4/3
0936	Slenderbill	1	S			PT 2/2
0939	Pterodroma	1	S			BWP 1
0941	P. hypoleuca	1	WNW			PH 6/6
0942	JFP	1				FT 1
0943	P. hypoleuca	1				
0948	JFP	1	SW			
0945	JFP	2			Rain squall	
0951	"	1	WNW		Albatross gone?	Sob?
0953	"	1	N			WNP 1
0958	"	1	N			Bird-1
1008	"	1	W			S-P-56/2
1022	"	1	W			BFA-1
1022	JFP Petrel	1	E			W-10/2
1026	P. hypoleuca	1	E			ST-18/2
1035	JFP Petrel	1	E			
1035	JFP Petrel	1	E			
1040	Fairy Tern	1	W			140/44
	W. Petrel	1	W			
	JFP Petrel	5	E			
1044	P. hypoleuca	1	W			
1055	BIRD	1				
1058	Sooty Pet	1	SE			
1113	Sooty Petrel	2	SE			
1117	JFP Petrel	1	SE			
1135	JFP Petrel	3	NW			
1177	JFP	3				
1180	P. hypoleuca	1				
1185	JFP	1				
1185	P. F. Albat.	1			joined albatross from before sunrise Dark range.	
1146	JFP Petrel	1	NW			
1146	Wedgetail	1	NW			
1155	JFP Petrel	3	NW			
1205	"	1	G			
1209	"	3	G			
1209	Wedgetail	7	G		all light	
1221	"	2				
1220	sooty tern	2			1 ad, 1 imm	
1225	"	16				
1231	ch. pet.	55			FF	
1231	P. hypoleuca	1				
1231	JFP	1				
1247	JFP	1				



Pelagic Bird Survey
DATE 21 Nov 1965
Pg. # 7

Moon: 20-30 N, 164-24 W

loc.

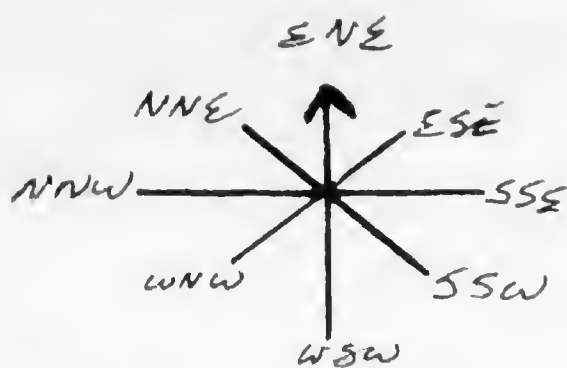
time species # dir. hgt. remarks

1300	Leach's P.	1	☉	
1307	JFP	1	SW	
1309	JFP	1		
1316	Leach's P.?	1		
1316	JFP	1		
1319	P. hypoleuca	1	NAW	
1337	White-Neck P.	1		
1337	Black-w. Pet.	1		
1337				albatross no longer with ship.
1428	Shear Pet	1	E	
1431	JFP Petrel	1	E	
1435	Shear-Pet	1	☉	little white on underwing dark above.
1437	Wedgetail	3	S	
1439	Shearbill	2	S	
1440	BWP	1	E	
1444	Wedgetail	1	S	
1446	P. externa	1	ENE	
1450	P. externa	1	E	
1452	Wedgetail	1	SE	
1455	P. hypoleuca	1	E	
1455	Wedgetail	1	W	
1455	P. hypoleuca	1	W	
1456	Wedgetail	2	ENE	
1503	JFP Petrel	2	W	
1506				2 B-F Albatrosses following
1519	BWP	1	W	
1515	JFP Petrel	1	E	
1515	Pterodroma	2	E	
1519	JFP Petrel	1	E	
1530	P. hypoleuca	2	W	
1530	Wedgetail	1	W	
1530	JFP Petrel	1	W	
1531	Shear-Pet	1	E	
1532	Wedgetail	1	S	
1535	Pterodroma	1	SE	
1538	Wedgetail	5	SE	
1541	JFP Petrel	1	E	
1545	Shear-Pet	1	ENE	
1556	P. hypoleuca	1	☉	
1600	JFP	2	SW	
1609	JFP	2	SW	
1609	P. hypoleuca	1	NIE	
1614	Shear-Pet	1	SE	

down to 50+ feet

BFP 12/11
L 2/2
JFP 13/11
Ph 7/6
WNP 1
BWP 3/3
S-P 4/4
W 16/8
SB 2/11
Pe 1
Tt 3/2
KP-1

55/42



DATE 21 Nov 1965
Pg. # 4

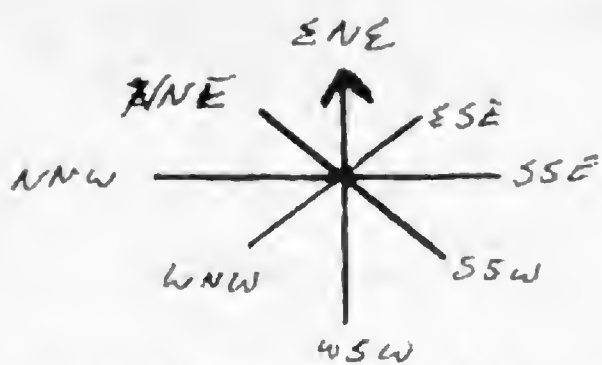
Noon: 20-30 N, 164-24 W

loc.

time	species	#	dir.	hgt.	remarks
1615	Leach's	1			
1620	P. hypoleuca	1			
1646	Wedgetail	1	NE		
49	Black-w. Pet	1	N		
1657	Wedgetail	1	N		small flock
FF 1700	Leach's	1			
	P. externa	2			
	wedgetail	25			
	Sooty Tern	10			
	com. Noddy	2			
	Fairy T.	2			
	Saeger (Pomarine)	1			dark (pomarine)
1705					No albatross following ship now
1710	P. hypoleuca	1			
1716	Wedgetail	1	SE		
1731	P. hypoleuca	1	S		
1739	Wedgetail	4	SE		
E 1746	"	5	SE		may be same or all same as 1739
1751	"	3	SE		
1803	JRP	1	SE		
~ 1810					Sunset

LD
PA 3/3
W 40/7
BWP-1
Pe - 2/1
ST - 10/1
CN - 2/1
FT - 2/1
PJ - 1
JRP - 1

64/13
55 42
140 44
79 42
338/141



DATE 22 Nov 1965
Pg. # 1

Notes: 20-23 N, 164-02 W

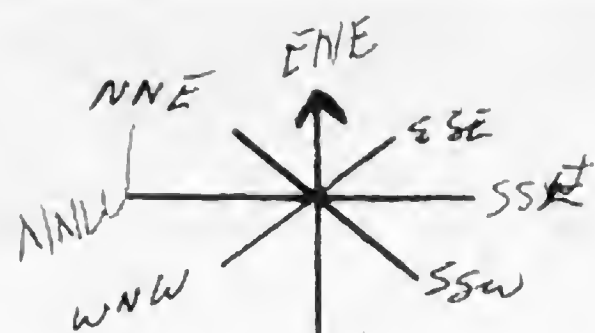
time	species	#	dir.	hgt.	remarks	loc.
0655					Begin observations	
0704	Wedgetail	4	SE?		Sunrise?	
0704	Dark rump	1	SE			
0720	Wedgetail	1	SE			
0720	Sooty Tern	1	N		Ad.	
0724	Shear. Pet	1	N			
0731	Leach's	1	N			
0739	JFP	1	E			
0739	P. hypoleuca	1	E			
0739	JFP	1	SE			
0739	Wedgetail	1	SE			
0740	Sooty Tern	1	W			
0740	JFP Petrel	2	↗			
0740	Wedgetail	1	↗			
0751	Wedgetail	1	E			
0751	JFP	1	E			
0751	Shear-Pet	1	NW			
0754	" "	2	NW			
0755	Wedgetail	2	↘			
0800	JFP	1	"			
0801	shear pet	1	NW			
0802	Wedgetail	1				
0802	JFP	1				
83	JFP	1	SW			
08	Wedgetail	1	SW			
08	Sooty/slender	1	S			
09	Kermadec P?	1	↖			
14	Wedgetail	1	SW			
18	Kermadec (194)	1	↖			
26	wedgetail	1	NE			
26	JFP	1	SW			
27	P. hypoleuca	1	↖			
31	B.F. Albat.	1				
35	P. externa	1	SW			
37	shear-pet	1				
38	P. externa	1	SW			
41	Fairy Tern	2				
42	Leach's	1				
44	shear-petrel	1	SW		probably P. externa	
44	Wedgetail	1				
50	White-tail Tropic	1				
0915	Dark-rump pet.	1				
0916	JFP	1				
0926	JFP	1				
0926	wedgetail	8				
0928	Dark Rump	1				
0935	shear pet.	1	NE			
0937	Shear-Pet	2	NW			

BFA - 1
TOTALS: Wedgetail 23
This page P. hypoleuca 2
J. F. Petrel 1
P. externa 2
Dark-Rump 3
Kermadec 2
shear-pet 10
sooty/slender 1
Leach's 2
Sooty Tern 2
FAIRY TEN 2
WTTB 1

62/46

~~all dark underwing.~~ old plumage if a Kermadec.
Underwing all dark except lightly mottled with white.
Two small white wing patches (each side.) Brown
dorsal side and ~~thence~~ down to upper chest. Rest of
underparts white.

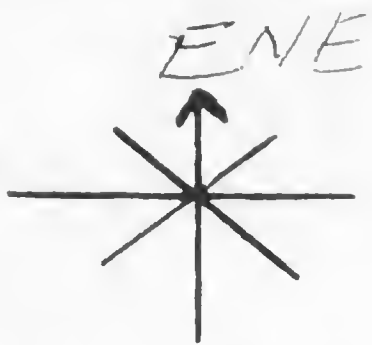
F



DATE 22 Nov 1965
Pg. # 2

Noon: 20-23 N, 161-62 W

time	species	#	dir.	hgt.	remarks	loc.
0950	shear-Pet	2	N			
1006	RFB	1			Imm, following briefly	SP 2/1
1021	Fairy Tern	1	N			RFB 5-5
1046	Wedgetail	1	NW			FT 4/4
1100	Fairy Tern	1	N			W 23-24
1110	JFP	1	N			JFP 5-5
1134	Wedgetail	1	NW			PT 1
1148	RFB	1	N-NW			
1242	RFB	1	SW		Imm	BIP 2-1
1315	JFP	1	G			Bird 1
1332	JFP	1	—			RT 1
1349	RFB	1	—		SA	WTTB 2-1
1355	Fairy Tern	1	N			
1429					Porpoise - about 10, all brown, not breaking surface	
1447	JFP	1	E			
1555	Red-foot	1	E			ST 30/1
1558	Pterodroma	1	E		Imm → SA	PL 5-2
1632	JFP	2	NE		one	
1632	P. hypoleuca	1				
	Bonin Island P.	2	NE			
1655	Bird	1	—			
1710	Ruddy Turnstone	1			circling ship.	
1719	P. hypoleuca	2	E			
1720	RFB	1	G		imm.	
1739	WTTB	2			Following ship.	
FF 1744	Sooty Tern	30 ⁵				
	Wedgetail	20 ⁵			idark	
	P. hypoleuca	3				
	Fairy Tern	1				
5					close	



time	species	#	dir.	hgt.	remarks	loc.
0635					Begin.	
0640	wedgetail	2	-			
0653					sunrise	
0718	shear-pet.	1	-			W - 10/17 1
0730	Pomarine Jaeger	1	-			S-P-1
0730	B-f Albatross	1	N			PJ-12/6
0745	Pom. Jaeger	4	ENE			BFA-3/3
0750	Kerm. Pet.	1	N			KP-1
58	Pom. Jaeger	2				JFP-1
0810	" "	2				
0829	" "	2			4 total with us	
0830					change course tow. outer	19/13
0836	JFP	1				
0842	BF Alb.	1			All dark	
0843	Wedgetail	1				
0920	Pom. Jaeger	1				
0930	BF Alb.	1			clear observation in	

DATE 28 Nov 1945 +10(W)

Time at entrance to Pearl Harbor = 13144

Time at sunset = 1753 Position at sunset = 20-55.5N; 158-29.0W

Miles traveled from entrance to Pearl Harbor to sunset = 43 mi

Miles traveled from sunset to 2400 hours = 40 mi. By OC.

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1745	LORAN	158-29W	20-55.5N
2.	1945	LORAN + CEL.	158-50W	20-41.8N
3.				
4.				
5.				
6.				

DATE 29 Nov 1945 +10(W)

Time at sunrise = 0646 Position at sunrise = 20-03.0N; 160-34.0W

Time at sunset = 1807 Position at sunset = 19-33.0N; 161-37.0W

Miles traveled from 0000 hours to sunrise = 64.5

Miles traveled from sunrise to sunset = 70.0

Miles traveled from sunset to 2400 hours = 51.0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0730	LORAN + CEL	20-03N	160-34W
2.	1115	LORAN + CEL	19-42.8N	161-03W
3.	1335	LORAN + CEL	19-24N	161-36W
4.	2300	LORAN	19-12.5N	162-03W
5.				
6.				

DATE _____

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
--	-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 10 Nov 1965 +10(W)

Time at sunrise = 0656 Position at sunrise = 18-32.5N; 163-11.5W

Time at sunset = 1823 Position at sunset = 164-31.5W; 17-33.5N

Miles traveled from 0000 hours to sunrise = 62.5

Miles traveled from sunrise to sunset = 96.8

Miles traveled from sunset to 2400 hours = 58.1

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
--	-------------	-------------	-----------	----------

1. 0702 LORAN + CEL. 163-13W 18-31.3N

2. 1115 LORAN 163-43.1W 18-13.8N

3. 1512 LORAN + CEL 164-12.5W 17-49.0N

4. 1946 LORAN 164-38W 17-26.5N

5. 2220 LORAN 165-08W 17-07.5N

6.

DATE

10 NOV. 1965

+10 (W)

Time at sunrise ~~0642~~ ⁰⁶⁴² Position at sunrise ~~12-30.3 N~~ ^{12-30.3 N}

12-30.3 N 163-11.3 W

Time at sunset = 1803 Position at sunset =

15-28.5 N 167-25.4 W

Miles traveled from entrance to Pearl Harbor to sunset =

53.5

Miles traveled from sunset to 2400 hours =

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

2.

3.

4.

5.

6.

DATE

11 NOV 1965

Time at sunrise = 0706 Position at sunrise =

16-27.5 N; 166-17 W

Time at sunset = 1838 Position at sunset =

15-28.5 N; 167-25.4 W

Miles traveled from 0000 hours to sunrise =

53.7

Miles traveled from sunrise to sunset =

88.8

Miles traveled from sunset to 2400 hours =

50.0

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1. 0642

LORAN C/L

166-17.0 W

16-27.8 N

2. 1000

LORAN

166-34.6 W

16-05.5 N

3. 1123

LORAN C/L

166-42.3 W

15-57.5 N

4. 1858

LORAN C/L

167-25.8 W

15-26.0 N

5.

6.

DATE _____

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 12 NOV 1965

Time at sunrise = 0716 Position at sunrise = 14-08.8N; 169-08W

Time at sunset = 1853 Position at sunset = 12-57.0N; 170-33W

Miles traveled from 0000 hours to sunrise = 76.5

Miles traveled from sunrise to sunset = 106.0

Miles traveled from sunset to 2400 hours = 42.0

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0821 LORAN + CEL 169-16W 13-57.2N

2. 1107 CEL + RDF 169-25.8W 13-58.0N

3. 1305 CEL + RDF 169-38.3W 13-45.5N

4. 1925 CEL 170-34.7W 12-54.5N

5.

6.

DATE

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 13 Nov 1965

Time at sunrise = 0725 Position at sunrise = 12-54.7N; 171-42.3W

Time at sunset = 1853 Position at sunset = 13-52.0N; 170-48W

Miles traveled from 0000 hours to sunrise = 81.2

Miles traveled from sunrise to sunset = 87.0

Miles traveled from sunset to 2400 hours = 43.2

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0702 CELESTIAL 171-46W 12-51.8N

2. 1106 CELT D.R. 171-25W 13-13N

3. 1923 CELESTIAL 170-45W 13-54.5N

4.

5.

6.

DATE _____

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE

14 NOV 1965

Time at sunrise = 0719 Position at sunrise = 15-10.5N; 169-40W

Time at sunset = 1901 Position at sunset = 15-02.5N; 171-02W

Miles traveled from 0000 hours to sunrise = 56.5

Miles traveled from sunrise to sunset = 103.0

Miles traveled from sunset to 2400 hours = 48.3

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0658 CELESTIAL 169-42W 15-08.8N

2. 1048 CEL + D.R. 170-09W 15-29.5N

3. 1922 CELESTIAL 171-04W 15-00.0N

4.

5.

6.

DATE _____

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 15 Nov 1965

Time at sunrise = 0729 Position at sunrise = 13-44.8N; 172-30.2W

Time at sunset = 1858 Position at sunset = 14-10.5N; 172-55.8W

Miles traveled from 0000 hours to sunrise = 69.5

Miles traveled from sunrise to sunset = 73.0

Miles traveled from sunset to 2400 hours = 43.5

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0707 CELESTIAL 172-28.5W 13-47N

2. 1108 CEL. + D.R. 172-48.5W 13-34.5N

3. 1924 CELESTIAL 172-51.8W 14-14.5N

4.

5.

6.

DATE _____

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 16 Nov 1965

Time at sunrise = 0729 Position at sunrise = 15-33.5N, 171-33.5W

Time at sunset = 1853 Position at sunset = 15-41.5N, 171-56.0W

Miles traveled from 0000 hours to sunrise = 72.0

Miles traveled from sunrise to sunset = 96.5

Miles traveled from sunset to 2400 hours = 48.8

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0800 D.R. 171-30W 15-36.5N

2. 1107 CELESTIAL 171-39W 15-57N

3. 1920 CELESTIAL 172-00W 15-39.2N

4.

5.

6.

DATE

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 17 Nov 1965

Time at sunrise = 0735 Position at sunrise = 14-40N; 173-36.8

Time at sunset = 1900 Position at sunset = 15-46.7N; 173-29.8

Miles traveled from 0000 hours to sunrise = 71.8

Miles traveled from sunrise to sunset = 96.0

Miles traveled from sunset to 2400 hours = 51.0

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0803 CEL + D.R. 173-42.2W 14-45.5N

2. 1113 R.Fix CEL. 174-10.8W 14-49.0N

3. 1928 CEL + D.R. 173-28.0W 15-48.4N

4.

5.

6.

DATE _____

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 18 Nov 1965

Time at sunrise = 0734 Position at sunrise = 16-44.0N; 172-05.0W

Time at sunset = 1848 Position at sunset = 16-47.8N; 170-28.8W

Miles traveled from 0000 hours to sunrise = 47.5

Miles traveled from sunrise to sunset = 93.5

Miles traveled from sunset to 2400 hours = 32.3

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0711 CELESTIAL 172-09W 16-44N

2. 1101 CEL & RDF 171-40W 16-44.7N

3. 1920 CELESTIAL 170-29.5W 16-47.5N

4.

5.

6.

DATE _____

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE

19 Nov 1965

Time at sunrise = 0726 Position at sunrise = 17-10N ; 169-54.5W ck

Time at sunset = 1840 Position at sunset = 18-10.2N ; 168-59.5W

Miles traveled from 0000 hours to sunrise = 29.0

Miles traveled from sunrise to sunset = 70.2

Miles traveled from sunset to 2400 hours = 48.2

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0756 LORAN 4 RDF 169-51W 17-15.5N

2. 1119 CEL. 4 RDF 169-35.5W 17-32.5N

3. 1911 CELESTIAL 168-57W 18-14.5N

4.

5.

6.

DATE

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 20 NOV 1965

Time at sunrise = 0723 Position at sunrise = 19-45N ; 168-04W

Time at sunset = 1827 Position at sunset = 20-10N ; 166-54.5W

Miles traveled from 0000 hours to sunrise = 61.0

Miles traveled from sunrise to sunset = 87.0

Miles traveled from sunset to 2400 hours = 40.7

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0659 CELESTIAL 168-06.5W 19-40.5N

2. 1118 CEL. & D.R. 167-49.0W 20-09.8N

3. 1856 CELESTIAL 166-59.0W 20-09.8N

4.

5.

6.

DATE _____

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE

21 Nov 1965

Time at sunrise = 0713 Position at sunrise = 20-24.0N; 165-06.2W

Time at sunset = 1813 Position at sunset = 20-31.5N; 163-27.2W

Miles traveled from 0000 hours to sunrise = 63.0

Miles traveled from sunrise to sunset = 94.0

Miles traveled from sunset to 2400 hours = 45.6

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0653	CELESTIAL	165-09.0W	20-23.5N
2.	1131	CEL + LORAN	164-28W	20-29.3N
3.	1520	CEL + LORAN	163-55W	20-29.8N
4.	1843	CEL + LORAN	163-22.4W	20-31.0N
5.				
6.				

DATE

Time at entrance to Pearl Harbor =

Time at sunset = Position at sunset =

Miles traveled from entrance to Pearl Harbor to sunset =

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

DATE 22 Nov. 1965

Time at sunrise = 0701 Position at sunrise = 20-23.2N ; 161-44.3W

Time at sunset = 1755 Position at sunset =

Miles traveled from 0000 hours to sunrise = 51.8

Miles traveled from sunrise to sunset = 86

Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1. 0633 CELESTIAL 161-47.5W 20-23.2N

2. 1005 CEL & LORAN 161-18W 20-24N

3. 1111 CEL & LORAN 161-09.5W 20-23.5N

4.

5.

6.

SMITHSONIAN GRID

Survey No. 25

PRELIMINARY REPORT AT-SEA SURVEY
November 1965

This report summarizes the results of the 25th survey of Smithsonian Grid I, conducted during the period 8-23 November, 1965. Smithsonian personnel included Kenneth Ammerman, Paul W. Woodward, Brian A. Harrington and Jeffrey Tordoff. Excellent cooperation was extended by the officers and crew throughout the trip.

Diurnal observations covered 166 hours and 1316 miles, of which 69.4 hours and 562 miles were within the Grid during the period 12-17 November. An additional 25 hours of nocturnal observations were conducted within the grid, 7.5 of them while the ship was drifting 20-25 miles NW of Johnston Island on the night of Nov. 18-19. Fourteen specimens were collected and 8 blood samples and 13 parasite samples were taken. No banded or tagged birds were collected or seen.

The normal cruise pattern was followed with the exceptions that Johnston Island was bypassed on the downward route and extra time was utilized in running north toward French Frigate Shoals from Johnston. The seas were exceptionally calm throughout the trip until November 20 when the seas became very rough and winds of 20-30 knots were encountered, emanating from a large storm southeast of the Hawaiian Islands.

This storm may have had some effect on several species including the migrating Slender-billed Shearwaters and Juan Fernandez Petrels, perhaps blocking or diverting some of the former species and shifting some of the latter somewhat southward. It may also account for records of three accidental species at sea, a Pintail Duck, Short-eared Owl and Japanese White-eyes, through this is less likely.

Nocturnal observations were held mainly to see if there were any major differences in species or numbers after dark and during the day. This proved not to be the case and observations were generally not run throughout the night. Small numbers of Sooty Terns were seen or heard, including several immatures. As in daylight, this species was confined to the eastern half of the grid. The complete lack of terns on the night of November 18-19, within 20 miles of Johnston Atoll, is good evidence that this species has for all practical purposes completely left the immediate vicinity of the island.

In general, the occurrence of most species groups and of total birds resembles the results obtained in 1963 rather than 1964. This is true for the Shearwater-Petrel group, mainly due to the migrating shearwaters, and for Terns and Tropicbirds. Boobies were less numerous this month this year; frigates and storm petrels were more numerous than in previous years.

The exceptionally smooth seas much of this month probably allowed some birds, notably the migrating shearwaters and the storm petrel, to be observed at greater distances than usual. This would mean that the estimated populations are perhaps higher than they should be. On the other hand, fairly

heavy swells probably resulted in some of these same birds passing unnoticed. Skies were overcast many days, sometimes enhancing observations by increasing the contrast between birds and sea, sometimes working to just the reverse effect.

TABLE 1 Summary of diurnal observations within the Grid, November 1965.

<u>Date</u>	<u>Birds</u>	<u>Sightings</u>	<u>Species</u>	<u>Flocks</u>	<u>Miles</u>	<u>Hours</u>	<u>Birds/Mile</u>
12 Nov.	212	34	6	10	106	11.7	2.00
13	73	28	10	2	87	11.5	0.84
14	115	57	9	3	103	11.7	1.12
15	42	40	8	0	73	11.5	0.58
16	50	46	8	0	97	11.4	0.52
17	<u>1298</u>	<u>169</u>	<u>8</u>	<u>77</u>	<u>96</u>	<u>11.6</u>	<u>13.52</u>
Totals	1790	404	16	92	562	69.4	3.19
Average	298	67	8	15	94	11.6	3.10

TABLE 2 Diurnal density of species groups within the Grid, November 1965.

<u>Species Group</u>	<u>No. Birds</u>	<u>Birds/mi²</u>	<u>Estimated Population/ 50,000 mi²</u>	<u>% Total Birds</u>
Shearwater-Petrel	1587	1.41	70,500	88.7
Tern	114	0.07	3,500	6.4
Tropicbirds	35	0.03	1,500	2.0
Boobies	2	0.002	100	0.1
Frigates	27	0.01	500	1.5
Shorebirds	5	0.009	450	0.2
Storm Petrels	12	0.02	1000	0.6
Miscellaneous	<u>7</u>	<u>0.006</u>	<u>300</u>	<u>0.4</u>
Total birds	1790	1.56	77,850	100
Birds in flocks	1543	----	-----	86.2

TABLE 3 Diurnal abundance of birds by Grid Quadrants, November 1965.

	<u>North</u>	<u>East</u>	<u>South</u>	<u>West</u>	
Birds	50	286	128	1326	790
Miles	97	177	143	145	762
Birds/Mile(linear)	0.52	1.62	0.90	9.14	

TABLE 4 Summary of Nocturnal Observations, November, 1965.

<u>Date</u>	<u>No. Birds</u>	<u>No. Sooty Terns</u>	<u>No. Hours</u>	<u>No. Miles</u>
Nov. 11-12	34	27	8.5	77
Nov. 12	8	7	5.1	46
Nov. 17	9	0	3.5	32
Nov. 18-19	2	0	7.7	Drifting

TABLE 5 Species identified during nocturnal observations, November, 1965.

Sooty Tern	34
Juan Fernandez Petrel*	1
Slenderbilled Shearwater*	8
Leach's Storm Petrel	1
Golden Plover*	1
Tropicbird sp.	1
Bird (unidentified)	7

* only between sunset and dark

TABLE 6 Summary of diurnal observations outside the Grid, November 1965.
linear

<u>Date</u>	<u>Birds</u>	<u>Sightings</u>	<u>Species</u>	<u>Flocks</u>	<u>Miles</u>	<u>Hours</u>	<u>Bird/mile</u>
8 Nov.	148	100	10	1	43	4.1	3.44
9	138	94	12	2	70	11.3	1.97
10	205	82	11	3	97	11.5	2.11
11	184	59	11	8	89	11.5	2.07
18	837	140	11	48	94	11.3	8.90
19	139	55	9	9	70	11.3	1.99
20	200	93	14	9	87	11.1	2.30
21	338	141	11	9	94	11.0	3.60
22	143	70	13	2	86	10.9	1.65
23	19	13	5	0	24	2.7	0.79
Total	2349	847	28	91	754	96.5	3.12

TABLE 7 Species observed At Sea, November 1965.

<u>Species</u>	<u>Outside Grid</u>		<u>Inside Grid</u>	
	<u>No.</u>	<u>Birds/mile</u>	<u>No.</u>	<u>Birds/mile</u>
Black-footed Albatross	11	0.01	0	-
Wedge-tailed Shearwater	145	0.19	0	-
Slender-billed Shearwater	1277	1.69	1477	2.63
New Zealand Shearwater	1	0.001	0	-
Pale-footed Shearwater	3	0.004	0	-
Newell's Shearwater	1	0.001	1	0.002
Dark-rumped Petrel	3	0.004	0	-
Juan Fernandez Petrel	145	0.19	30	0.05
White-necked Petrel	5	0.007	0	-
Black-wing Petrel	21	0.03	4	0.007
Bonin Island Petrel	3	0.004	1?	0.002
Kermadec Petrel	8	0.01	2	0.004
Leach's Storm Petrel	41	0.05	12	0.02
Red-tailed Tropicbird	20	0.03	33	0.06
White-tailed Tropicbird	15	0.02	2	0.004
Blue-faced Booby	5	0.007	1	0.002
Red-footed Booby	12	0.01	1	0.002
Brown Booby	2	0.003	0	-
Greater Frigatebird	17	0.02	27	0.04
Golden Plover	12	0.01	5	0.009
Ruddy Turnstone	1	0.001	0	-
Sooty Tern	161	0.21	112	0.20
Common Noddy	4	0.005	0	-
Fairy Tern	10	0.01	4	0.007
Skua	1	0.001	1	0.002
Pomarine Jaeger	19	0.03	0	-
Pintail Duck	1	0.001	0	-
Short-eared Owl	0	-	1	0.002
Japanese White-eye	2+	0.003	0	-
<u>Pterodroma hypoleuca</u>	87	0.12	32	0.06
<u>Pterodroma externa</u>	35	0.05	1	0.002

TABLE 8 Birds collected, November 1965.

<u>Species</u>	<u>Inside Grid</u>	<u>Outside Grid</u>
Red-tailed Tropicbird	5	2
Blue-faced Booby	1	1
Golden Plover	0	2
Red-footed Booby	0	1
Juan Fernandez Petrel	0	1
Leach's Storm Petrel	0	1
Total	6	8

Species Accounts

Black-footed Albatross

The first individuals were observed November 20 at about 20°N - 168°W, approximately 250 miles southwest of French Frigate Shoals. A few were seen each day thereafter, with no more than two present at once. Most individuals followed only briefly but three remained for periods up to 6 hours.

Wedge-tailed Shearwater

This species was not recorded in the grid. All the sightings were east of 168°. Of the total of 145, 112 were recorded on 21 and 22 November and 31 were seen between Oahu and the grid. Nearly all the sightings between Oahu and the grid were of single birds or pairs while those on the return route included many small groups and a few mixed flocks. A large number of individuals were moving south or southeast. This, coupled with the absence of the species west of 168°, may indicate that at least some of the birds now finishing their breeding season winter somewhere between central Pacific breeding grounds and South America.

Slender-billed Shearwater

The separation of this species from similar Sooty Shearwater in the field continues to be a great problem. Both species may resemble each other under various combinations of light and sea. Nearly all the birds seen well this trip possessed the smoky underwings of the Slender-bill. Those few which had the bright white underwing linings characteristic of the Sooty Shearwater may have belonged to the small percentage of Slender-bills which also show this characteristic. It appears that only a small portion of the

migrating shearwaters passing through the central Pacific in fall are Sooty Shearwaters. However, since the grid was not surveyed during September and October, it is possible that larger numbers of that species were present there then.

Nearly 100% of the birds observed were flying due south. As the birds increased in numbers so did the numbers of flocks, ranging in size from 5 to 55 birds with an average of about 14. Many of the flocks spent much time milling about along their flight path, indicating that they might be young birds and that the young pass through the area primarily at the end of the migration period.

Approximately equal numbers of this species were seen within and outside the grid. However, the birds were far from evenly distributed, more than 2000 of the total of 2754 being observed on 17 and 18 November. Another smaller concentration was encountered on November 10-12, accounting for 359 of the remainder. Each of these areas was partially within the grid. Thus, of the total of 1477 present in the grid, 1269 were recorded on the westernmost leg November 17, while low numbers were obtained on the inner four legs.

There thus appears to be a general gradient of increasing numbers from east to west, which is consistent with the even higher numbers recorded in the Howland-Baker area in September and October. Approximately equal numbers of birds were recorded between 167° and 170° over a week's interval. However, the large numbers of birds observed on the 17th and 18th were directly north of areas which had very few birds only one or two days previously. Therefore, the apparent local fluctuations and perhaps even the apparent gradient may

be due more to the differences in time than in location. Though observed only on the westernmost grid leg, equally large numbers may have been present on a broad front throughout the entire grid on November 17. The results obtained by the USNS Shearwater in the same areas a few days apart from the present observations should support one view or another.

These large numbers may represent one "wave" of migrants which departed from the Arctic waters at approximately the same time. Another possibility is that numbers of birds accumulated to the north of a large storm center in the Hawaiian Islands area or detoured around it to the west. Though the effect, if any, of weather conditions on oceanic species is presently unknown, it is conceivable that large storm fronts might be avoided, especially by migrants.

New Zealand Shearwater

One individual believed to be this species was flushed from the water on November 20 in the vicinity of 20°N - 167°W .

Pale-footed Shearwater

Two separate individuals were recorded on November 20 in the same area as the New Zealand Shearwater. Another was seen on November 11 about 180 miles NE of Johnston. None were recorded in the grid. Both these New Zealand species have been recorded previously in the area in fall, always in very low numbers.

Newell's Shearwater

One bird was seen the first day about 20 miles off Oahu. Another was seen in the grid on November 14 in a small flock of Sooty Terns and Juan Fernandez Petrels. Numbers are comparable with previous November records.

Dark-rumped Petrel

Three sightings were obtained on November 22 approximately 120 miles SW of the island of Kauai.

Juan Fernandez Petrel

This species was nearly five times as numerous outside the grid as within this month. Greatest densities were recorded between 163° and 168° above 20° . More than half of the 145 observed outside the grid were seen on November 21 in the middle of this area. An additional 28 Pterodroma externa recorded in this area were probably nearly all of this race. This concentration may have resulted from the storm in the area. Within the grid, 24 were observed in the eastern half, only 6 in the western half. Most sightings were of 1-4 birds though a few were seen in feeding flocks with terns.

The northward movement of this species in fall seems to be correlated with the decline in the local Wedgetailed Shearwater populations, the Pterodroma seemingly moving into areas nearer the islands where the Wedge-tails are most numerous during their breeding season. The similarities in food requirements, morphology and feeding habits between the two groups suggest that competition between them could be a factor in this seasonal distribution, the less numerous Pterodromas being limited to areas of comparative low Wedge-tail density, then moving into the more food-rich areas closer to the islands as the Wedge-tails vacate them.

White-necked Petrel

Five were seen, all outside the grid, all but one north of 20° and one within 25 miles of Oahu.

Black-winged Petrel

A total of 21 outside the grid and 4 within the grid were identified. An additional 119 Pterodroma hypoleuca were seen, probably nearly all of this race, 32 within the grid and 87 outside. This species was most numerous south and east of the area of high density of P. externa group, from Oahu to 16°N 167°W. Nearly all sightings were of 1-4 individuals, the majority of them single birds. Almost none were in mixed flocks. Several individuals were recorded on November 14 in the grid which had nearly all dark underwings. Distribution within the grid was random.

Bonin Island Petrel

Three individuals were identified to this race of Pterodroma hypoleuca outside the grid. Two seen together on 22 November were flying NE. The single bird recorded in the grid on 17 November was not seen well enough to distinguish it from Pterodroma leucoptera with certainty. It was flying NW.

Kermadec Petrel

The distribution of this species resembles that of the Juan Fernandez Petrel this month. One or two were recorded each day after leaving the grid, one within 30 miles of Oahu. Two were seen in the grid, on November 13 and 14, the latter individual in a feeding flock of Juan Fernandez Petrels and Sooty Terns. Numbers are comparable with those of the previous two years for the same areas, the slightly higher number outside the grid reflecting a slight concentration in an area not previously sampled at this time.

Leach's Storm Petrel

While a few of the white-rumped dark storm petrels observed may have been Harcourt's, which may be nearly indistinguishable from this species in the field, probably the greatest majority were Leach's Storm Petrels.

Fairly high numbers were recorded in contrast to sparse records in 1963 and 1964. All but one sighting were of single birds. Densities were highest between Oahu and the grid, lowest within the grid.

One bird, attracted and dazed by the lights, was netted from the stern while the ship was drifting near Johnston Island the night of November 18-19.

Red-tailed Tropicbird

Numbers within the grid were comparable to those of 1963 while numbers outside were noticeably higher than in either previous years. All sightings were south of 20° , with the highest daily totals below 16° . Thus, 24 of the 33 within the grid were south of 16° .

Seven birds were collected, of all age groups; six were males. Five birds were collected within the grid (south of 15°); these weighed from 100 to nearly 300 grams more than the two collected north of the grid (above 19°). This may indicate the presence of two different populations in the two areas or may reflect a difference in food supply.

White-tailed Tropicbird

Numbers paralleled those of 1964 within and outside the grid. All but three individuals were recorded above 18° . Two were seen in the grid on the 12th and one was observed about 15 miles south of 18° . Eight were seen on November 9.

Blue-faced Booby

Numbers are nearly identical with those of 1963 and 1964. Two immatures were collected, one in the grid. The one collected to the north weighed much less (600 grams) than the other, similar to the Red-tailed Tropicbirds.

Red-footed Booby

This species appears to be very variable in numbers from month to month and year to year. About as many were recorded outside the grid this month as in October 1964 and November 1963. Only one was seen within the grid this month, a subadult on November 16 about 130 miles SW of Johnston. Of the 12 present outside the grid, 5 were recorded as immatures and 2 as subadults. Five occurred within 30 miles of Oahu and five more were within 250 miles of Oahu and Kauai.

One adult which flew aboard after dark November 8 was captured, blood-sampled and released.

Brown Booby

Two immatures were seen outside the grid. One occurred about 240 miles SW of Oahu. The other about 180 miles east of Johnston.

Greater Frigatebird

As with the Red-footed Booby, no definite pattern is discernible from year to year in the occurrence of this species this month except that the largest numbers are recorded at this season. Nearly twice as many were present in the grid as in 1964. Non-grid numbers were comparable to those of 1963.

It is likely that the increase in numbers away from islands at this time of year is due to birds having to range farther for food. Several birds were actively feeding by themselves. It is not known to what extent this depends upon the absence of concentrations of the abundant breeding species near the islands, in terms of what proportion of the frigate populations preys upon these species and what proportion of individual frigate's total food is pirated from other species.

Golden Plover

Numbers were more comparable with 1963 than 1964, supporting the view that the Slender-billed Shearwater migration also paralleled 1963.

Two individuals were collected between Oahu and the grid. Neither was molting. Many circled the ship several times, one landing after dark on November 17 which avoided capture.

Ruddy Turnstone

The single sighting was obtained on November 22, about 175 miles W of Oahu.

Sooty Tern

Total numbers were nearly identical to those of 1964 but the results in the grid more closely resemble 1963.

Outside the grid birds were encountered between 160° and 165° , to the east and northeast of Johnston Atoll. The decline from 40+ per day on November 9 and 10 to about 30 per day on November 21 and 22 may reflect the departure of birds from the area, though it may be too small a difference

to be significant. Of the total of 161 birds outside the grid, 115 were in seven flocks on these four days.

Within the grid, nearly the entire total (108 of 112) were seen on the eastern three legs, mainly to the south of Johnston Atoll. Of this 108, 88 were in flocks.

Nearly all of the birds not in flocks were flying S or SE, particularly on November 9. This, in conjunction with the observed distribution, suggests that at least some of the Hawaiian and Johnston Sooty Terns may winter somewhere to the south and east toward South America.

Common Noddy

No change in status over previous years was noted this month.

Fairy Tern

Slightly greater numbers were noted both within and outside the grid than in the previous two years. Three of the four in the grid were in one feeding flock of Sooty Terns and Juan Fernandez Petrels on the 13th. Six single sightings were obtained on November 22.

Pomarine Jaeger

All but one were within 50 miles of Oahu, 6 the first day out and 12 the last day. The remaining individual was seen on November 21.

Skua

One was observed in the grid November 17, 270 miles SW of Johnston and another occurred November 19, 40 miles north of Johnston. Both birds were flying south, which at this season may indicate that they are returning to a point of origin in the Antarctic rather than in the Arctic.

Pintail Duck

A female or immature of this species was seen flying south on November 11. Small numbers of this species have been recorded by the Pacific Project from several islands throughout the central Pacific, including Sand-Johnston.

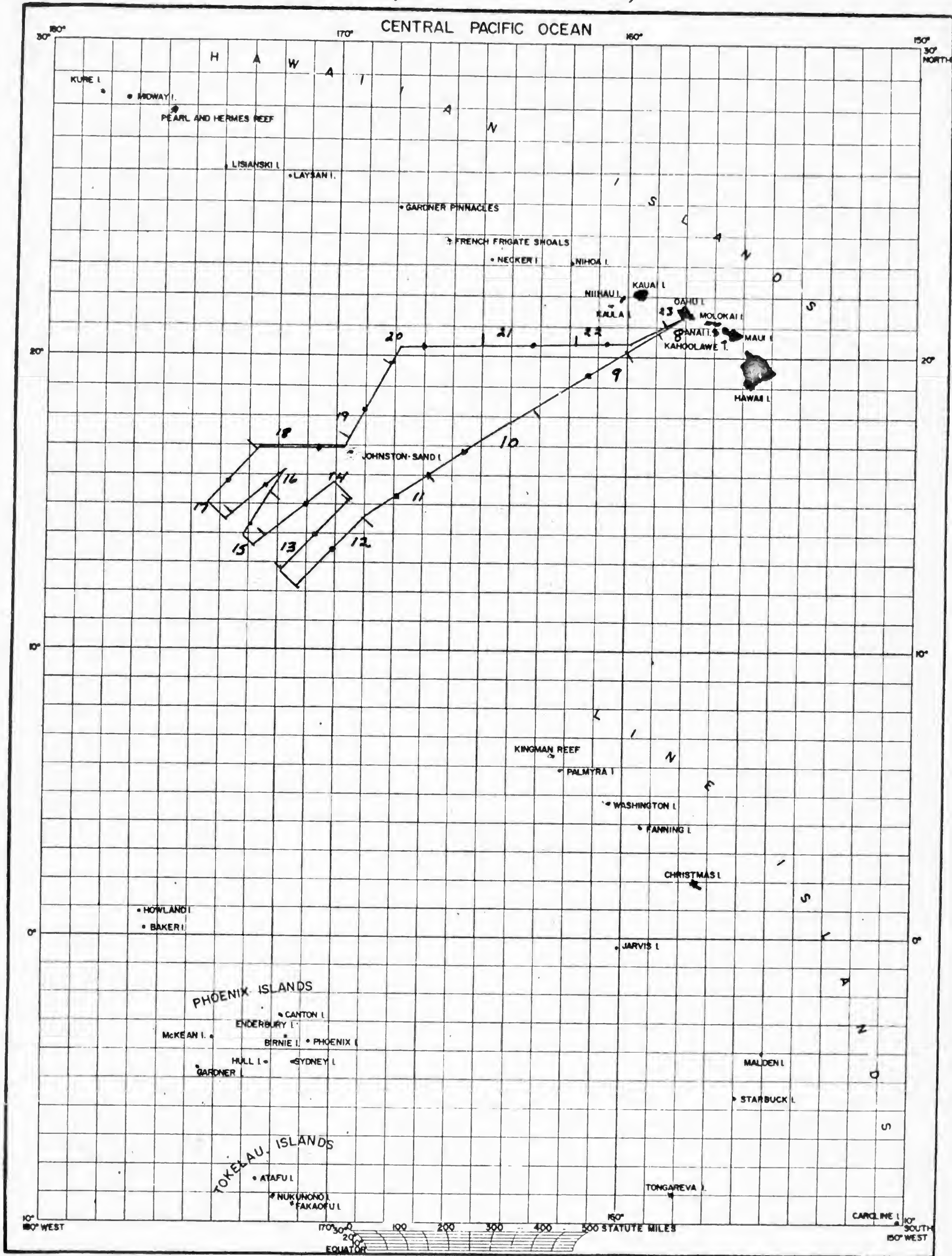
Short-eared Owl

One individual was observed clearly flying near the ship for about one minute in the grid on November 16, about 130 miles west of Johnston Atoll. This species has been recorded by the Project on Johnston.

Japanese White-eye

At least two individuals flew over the ship on November 9, about 250 miles SW of Oahu. A group of unknown size was believed to have been heard earlier the same day but were never observed. Several times the next day one was believed heard and some of the ships' crew reported that one might have been aboard, perhaps one from the previous day.

November 1965 Pelagic Bird Survey



SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 8 JUL 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900																
1000																
1100																
1200																
1300																
1400																
1500																
1600																
1700																
1800																
1900																
2000																
2100																
2200																
2300																
2400																

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 23 Jan 65

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	21-03	159-18													
0200	22	-10													
0300	23	02													
0400	24	158-54													
0500	25	45													
0600	26	36													
0700	27	27													
0800	28	18													
0900	29	09													
1000	30	158-00													
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
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SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 07 NOV 1965 (1100)

	TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
71	0100	25-24.5 N	159-37 W	11	10	1011.5	78			1		130	87	9	028	246 — 10
	0200	25-23.3 N	159-45 W	11	10	1010.3	78			1		120	82	9	028	246 — 10
	0300	24-19.2 N	159-51.7 W	11	10	1009.3	77			1		130	82	9	023	246 — 10
	0400	24-15.7 N	160-01 W	11	10	1011.2	77			1		.	83	6	021	246 — 10
	0500	23-02.5 N	160-20 W	11	10	1010.3	77			1		.	82	9	028	246 — 10
	0600	21-46 N	160-10 W	11	10	1010.5	78			1		.	81	7	027	246 — 10
	0700	20-31 N	160-05 W	11	10	1011.5	78			2		130	82	8	058	246 — 10
	0800	20-20 N	160-30 W	9	10	1010.5	81			3		110	82	11	016	246 — 10
	0900	20-07 N	160-37 W	11	10	1010.3	81			4		110	82	10	011	246 — 10
55	1000	19-52 N	160-31 W	2000.2 M	10	1010.3	84			5		110	82	10	023	246 — 10
5	1100	19-40 N	160-23 W	2000.2 M	10	1010.3	84			5		110	82	10	023	246 — 10
	1200	17-40.2 N	160-02 W	2000.2 M	10	1010.2	84			5		110	82	10	144	246 — 10
	1300				10	1010.2	84			5		110	82	10	145	246 — 10
	1400				10	1010.5	85			5		110	82	7	270	246 — 10
	1500			2000.2 M	10	1010.5	86			5		110	82	7	270	246 — 10
	1600			11	10	1010.5	84			7		110	82	7	270	246 — 10
	1700			11	10	1010.2				5			81	4		246 — 10
	1800			11	10	1010.2				5						246 — 10
	1900			11	10	1010.5				5						246 — 10
	2000	19-24.0 N	160-04.5 W	11	10	1010.3	81			5		110	82	5		246 — 10
	2100	19-24.2 N	160-55.4 W	11	10	1010.2	80			5		110	82	6	010	246 — 10
	2200	18-18.8 N	160-02.3 W	11	10	1010.6	79			5		110	82	6	030	246 — 10
	2300	18-13.0 N	160-10.8 W	11	10	1010.8				5		110	82	6	030	246 — 10
	2400	18-09.0 N	160-18.3 W	11	10	1010.9	79			5		110	82	5	012	246 — 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 18 AUG 1965 (T/CW)

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	18-41.0 N	162-25.9 W	30.1		10	1011.2	79			1			79	5	210	235-12
0200	18-50.7 N	162-36.3 W	30.1		10	1011.2	79			1			79	5	210	235-12
0300	18-50.3 N	162-42.4 W	31		10	1011.5	79			1		115	79	5	210	235-12
0400	18-45.7 N	162-52.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
0500	18-41.0 N	163-02.9 W	31		10	1011.5	79			1		115	79	5	210	235-12
0600	18-36.7 N	163-05.8 W	31		10	1011.5	79			1		115	79	5	210	235-12
0700	18-31.5 N	163-13.1 W	31		10	1011.2	79			1		115	79	5	210	235-12
0800	18-26.7 N	163-17.8 W			10	1011.2	79			1		115	79	5	210	235-12
0900	18-21.9 N	163-21.1 W			10	1011.5	79			1		115	79	5	210	235-12
1000	18-17.0 N	163-24.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1100	18-12.1 N	163-27.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1200	18-07.2 N	163-30.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1300	18-02.3 N	163-33.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1400	17-57.4 N	163-36.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1500	17-52.5 N	163-39.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1600	17-47.6 N	163-42.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1700	17-42.7 N	163-45.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1800	17-37.8 N	163-48.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
1900	17-32.9 N	163-51.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
2000	17-28.0 N	163-54.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
2100	17-23.1 N	163-57.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
2200	17-18.2 N	164-00.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
2300	17-13.3 N	164-03.1 W	31		10	1011.5	79			1		115	79	5	210	235-12
2400	17-08.4 N	164-06.1 W	31		10	1011.5	79			1		115	79	5	210	235-12

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 11 AUGUST 1965 (+10W)

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16-53.2N	165-07.5W	OVERCAST	4	1005.2	79			10		3	71	17	230	234 — 10
0200	16-49.7N	165-08.2W	11	2	1005.0	78			10		3	71	15	215	234 — 10
0300	16-46.0N	165-08.5W	11	2	1004.8	78			10		3	71	17	220	234 — 10
0400	16-42.7N	165-09.2W	11	2	1004.7	78			10		3	71	19	220	234 — 10
0500	16-39.4N	165-09.5W	11	2	1004.5	78			10		3	71	21	220	234 — 10
0600	16-35.8N	165-10.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
0700	16-32.3N	165-10.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
0800	16-28.8N	165-11.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
0900	16-25.3N	165-11.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1000	16-21.8N	165-12.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1100	16-18.3N	165-12.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1200	16-14.8N	165-13.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1300	16-11.3N	165-13.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1400	16-07.8N	165-14.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1500	16-04.3N	165-14.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1600	16-00.8N	165-15.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1700	15-57.3N	165-15.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1800	15-53.8N	165-16.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
1900	15-50.3N	165-16.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
2000	15-46.8N	165-17.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
2100	15-43.3N	165-17.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
2200	15-39.8N	165-18.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10
2300	15-36.3N	165-18.5W	11	10	1004.5	78			10		3	71	22	220	234 — 10
2400	15-32.8N	165-19.0W	11	10	1004.5	78			10		3	71	22	220	234 — 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 12 Nov 64 1965 (+10W)

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-51.0N	108-14.1W	1020.2	10	1008.2	78			10			81	18	010	231 - 10
0200	14-45.0N	108-24.1W	1020.2	10	1008.2	82			10			84	18	010	231 - 10
0300	14-40.0N	108-34.1W	1020.2	10	1008.2	82			10			84	18	010	231 - 10
0400	14-35.0N	108-44.1W	1020.2	10	1008.2	77			10			84	18	010	231 - 10
0500	14-30.0N	108-54.1W	1020.2	10	1008.2	77			7		010	84	20	010	231 - 10
0600	14-25.0N	109-04.1W	1020.2	10	1008.2	80			8		010	84	20	010	231 - 10
0700	14-20.0N	109-14.1W	1020.2	10	1008.2	80			8		010	84	20	010	231 - 10
0800	14-15.0N	109-24.1W	1020.2	10	1008.2	80			8		010	84	20	010	231 - 10
0900	14-10.0N	109-34.1W	1020.2	10	1008.2	80			8		010	84	20	010	231 - 10
1000	14-05.0N	109-44.1W	1020.2	10	1008.2	80			8		010	84	20	010	231 - 10
1100	14-00.0N	109-54.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
1200	13-55.0N	109-04.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
1300	13-50.0N	109-14.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
1400	13-45.0N	109-24.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
1500	13-40.0N	109-34.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
1600	13-35.0N	109-44.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
1700	13-30.0N	109-54.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
1800	13-25.0N	110-04.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
1900	13-20.0N	110-14.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
2000	13-15.0N	110-24.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
2100	13-10.0N	110-34.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
2200	13-05.0N	110-44.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
2300	13-00.0N	110-54.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10
2400	12-55.0N	111-04.1W	1020.2	10	1008.2	81			8		010	84	20	010	231 - 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 13 July 1965 (10W)

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12° 10' N	171° 14' W	Scattered	10	1007.5	81			1			24	11	012	235 - 10
0200	12° 10' N	171° 27' W	"	10	1007.5	81			1			24	11	012	216 - 10
0300	12° 22' N	171° 34' W	"	10	1007.1	81			1			24	13	022	316 - 12
0400	12° 30' N	171° 43' W	"	10	1006.5	82			2			24	14	027	316 - 10
0500	12° 35' N	171° 49' W	"	10	1006.2	82			3			24	14	027	316 - 10
0600	12° 41' N	171° 54' W	"	10	1006.2	83			3			24	14	027	316 - 10
0700	12° 48' N	171° 45' W	"	10	1005.1	83			3			24	14	027	047 - 10
0800	12° 58' N	171° 40' W	"	10	1008.7	79			3		015	24	14	01	014 - 3.8
0900	13° 02' N	171° 35' W	"	10	1009.1	78			4		010	24	10	03	027 - 12
1000	13° 08' N	171° 31' W	"	10	1009.5	75			3		010	24	10	05	027 - 10
1100	13° 18' N	171° 27' W	"	10	1008.9	71			3		015	24	8	01	027 - 10
1200	13° 28' N	171° 22' W	"	10	1009.1	71			3		015	24	7	01	027 - 10
1300	13° 38' N	171° 18' W	"	10	1007.5	71			3		010	24	7	01	027 - 10
1400	13° 44' N	171° 12' W	"	10	1007.1	72			3		010	24	8	01	027 - 10
1500	13° 50' N	171° 08' W	"	10	1006.5	71			3		010	24	10	02	027 - 10
1600	13° 55' N	171° 05' W	"	10	1007.5	71			3		015	24	6	01	027 - 10
1700	13° 59' N	171° 02' W	"	10	1007.9	71			3		015	24	4	180	027 - 10
1800	14° 05' N	171° 02' W	"	10	1008.1	71			3		015	24	5	180	027 - 10
1900	14° 12' N	171° 02' W	"	10	1009.5	71			3		020	24	5	180	027 - 10
2000	14° 18' N	171° 02' W	"	10	1009.9	71			3		015	24	5	180	027 - 10
2100	14° 28' N	171° 02' W	"	10	1009.8	71			3		015	24	2	01	027 - 10
2200	14° 38' N	171° 02' W	"	10	1006.5	71			1		015	24	2	01	027 - 10
2300	14° 48' N	171° 02' W	"	10	1007.8	71			2		015	24	5	121	027 - 10
2400	14° 58' N	171° 02' W	"	10	1009.8	71			2		015	24	10	112	027 - 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 149-11-10 (25) (A.M.)

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-30	170-12	1009.5		10	1009.5	70			3			24	7	10	040-10
0200	14-30	170-20	1009.1		10	1009.1	70			3			24	7	10	040-10
0300	14-30	170-28	1008.5		10	1008.5	70			3			24	7	10	040-10
0400	14-30	170-36	1008.5		10	1008.5	70			3			24	7	10	040-10
0500	14-30	170-44	1008.5		10	1008.5	70			3			24	7	10	040-10
0600	14-30	170-52	1008.5		10	1008.5	70			3			24	7	10	040-10
0700	14-30	171-00	1008.1		10	1008.1	70			3			24	7	10	040-10
0800	14-30	171-08	1007.5		10	1007.5	70			3			24	7	10	040-10
0900	14-30	171-16	1007.3		10	1007.3	70			3			24	7	10	040-10
1000	14-30	171-24	1010.5		10	1010.5	70			3			24	7	10	040-10
1100	14-30	171-32	1010.5		10	1010.5	70			3			24	7	10	040-10
1200	14-30	171-40	1009.5		10	1009.5	70			3			24	7	10	040-10
1300	14-30	171-48	1009.3		10	1009.3	70			3			24	7	10	040-10
1400	14-30	171-56	1009.1		10	1009.1	70			3			24	7	10	040-10
1500	14-30	172-04	1007.5		10	1007.5	70			3			24	7	10	040-10
1600	14-30	172-12	1007.5		10	1007.5	70			3			24	7	10	040-10
1700	14-30	172-20	1007.8		10	1007.8	70			3			24	7	10	040-10
1800	14-30	172-28	1009.5	HAZ	10	1009.5	70			3			24	7	10	040-10
1900	14-30	172-36	1009.5		10	1009.5	70			3			24	7	10	040-10
2000	14-30	172-44	1009.1		10	1009.1	70			3			24	7	10	040-10
2100	14-30	172-52	1010.7		10	1010.7	70			3			24	7	10	040-10
2200	14-30	173-00	1010.7		10	1010.7	70			3			24	7	10	040-10
2300	14-30	173-08	1010.5		10	1010.5	70			3			24	7	10	040-10
2400	14-30	173-16	1010.5		10	1010.5	70			3			24	7	10	040-10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 15 November 1961 (F10W)

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-23.0	171-24.0	11	10	1010.7	77			2			84	6	25	237-10
0200	14-17.0	171-22.0	11	10	1009.9	78			1			82	7	25	227-10
0300	14-02.0	171-20.0	11	10	1009.1	78			1			81	6	25	217-10
0400	13-50.0	171-08.0	11	10	1009.1	78			1			81	6	25	207-10
0500	13-35.0	171-11.0	11	10	1008.8	78			1			81	6	25	197-10
0600	13-21.0	171-18.0	11	10	1008.1	78			1			81	6	25	187-10
0700	13-07.0	171-22.0	11	10	1010.2	78			1			81	6	25	237-10
0800	12-51.0	171-24.0	11	10	1010.8	78			1			81	6	25	227-10
0900	12-37.0	171-20.0	11	10	1011.2	78			1		105	81	10	25	217-10
1000	12-23.0	171-22.0	11	10	1011.5	78			1		100	81	10	25	207-10
1100	12-09.0	171-24.0	11	10	1011.9	78			1		100	81	10	25	197-10
1200	11-55.0	171-20.0	11	10	1011.2	78			1		100	81	10	25	187-10
1300	11-41.0	171-22.0	11	10	1010.5	78			1		100	81	10	25	177-10
1400	11-27.0	171-24.0	11	10	1009.9	78			1		100	81	10	25	167-10
1500	11-13.0	171-20.0	11	10	1009.5	78			1		100	81	10	25	157-10
1600	10-59.0	171-22.0	11	10	1009.1	78			1		100	81	10	25	147-10
1700	10-45.0	171-24.0	11	10	1008.1	78			1		100	81	10	25	137-10
1800	10-31.0	171-20.0	11	10	1008.8	78			1		100	81	10	25	127-10
1900	10-17.0	171-22.0	11	10	1008.5	78			1		100	81	10	25	117-10
2000	10-03.0	171-24.0	11	10	1010.5	78			1		100	81	10	25	107-10
2100	9-49.0	171-20.0	11	10	1010.8	78			1		100	81	10	25	097-10
2200	9-35.0	171-22.0	11	10	1010.3	78			1		100	81	10	25	087-10
2300	9-21.0	171-24.0	11	10	1010.5	78			1		100	81	10	25	077-10
2400	9-07.0	171-20.0	11	10	1010.2	78			1		100	81	10	25	067-10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 16 Jan 1965 (1000)

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15-50 N	172-17 W			15	1012.2										044 10
0200	15-55 N	172-17 W			15	1011.5										044 10
0300	15-03 N	172-21 W			15	1011.2										044 10
0400	15-08 N	172-25 W			15	1010.9										044 10
0500	15-15 N	172-30 W			15	1010.5										044 10
0600	15-23 N	172-44 W			15	1010.2										044 10
0700	15-30 N	172-57 W			15	1010.9										044 10
0800	15-35 N	173-00 W			15	1012.2										044 10
0900	15-43 N	173-30 W			15											044 10
1000	15-50 N	173-30 W			15											044 10
1100	15-56 N	173-32 W			15											044 10
1200	16-04 N	171-33.5 W			15											044 10
✓ 1300	16-13 N	171-26 W			15											044 10
1400	16-09 N	171-31 W			15											044 10
1500	16-03 N	171-39 W			15											044 10
1600	15-56 N	171-45 W			15											044 10
1700	15-51 N	171-50 W			15											044 10
1800	15-41 N	171-55 W			15											044 10
1900	15-41 N	171-58 W			15											044 10
2000	15-36 N	172-05 W			15											044 10
2100	15-31 N	172-13 W			15											044 10
2200	15-25 N	172-21 W			15											044 10
2300	15-19 N	172-30 W			15											044 10
2400	15-14 N	172-38 W			15											044 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 17-1-1963 (410W)

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15-39 N	172-43 W		10	1013	21			2			21	3	00	255 — 10
0200	15-04 N	172-51 W		10	1013	21			2			21	3	00	255 — 10
0300	14-57 N	173-02 W		10	1013	21			2			21	3	00	255 — 10
0400	14-53 N	173-09 W		10	1013	21			2			21	3	00	255 — 10
0500	14-48 N	173-16 W		10	1013	21			2			21	3	00	255 — 10
0600	14-42 N	173-25 W		10	1013	21			2			21	3	00	255 — 10
0700	14-36 N	173-33 W		10	1013	21			2			21	3	00	255 — 10
✓ 0800	14-45 N	173-42 W		10	1013	21			2			21	3	00	255 — 10
0900	14-51 N	173-51 W		10	1013	21			2			21	3	00	255 — 10
1000	14-57 N	173-58 W		10	1013	21			2			21	3	00	255 — 10
1100	15-05 N	174-07 W		10	1013	21			2			21	3	00	255 — 10
1200	15-10 N	174-12 W		10	1013	21			2			21	3	00	255 — 10
1300	15-18 N	174-08 W		10	1013	21			2			21	3	00	255 — 10
1400	15-24 N	174-00 W		10	1013	21			2			21	3	00	255 — 10
1500	15-28 N	173-50 W		10	1013	21			2			21	3	00	255 — 10
1600	15-38 N	173-44 W		10	1013	21			2			21	3	00	255 — 10
1700	15-38 N	173-39 W		10	1013	21			2			21	3	00	255 — 10
1800	15-42 N	173-35 W		10	1013	21			2			21	3	00	255 — 10
1900	15-49 N	173-30 W		10	1013	21			2			21	3	00	255 — 10
2000	15-52 N	173-25 W		10	1013	21			2			21	3	00	255 — 10
2100	16-00 N	173-15 W		10	1013	21			2			21	3	00	255 — 10
2200	16-10 N	173-04 W		10	1013	21			2			21	3	00	255 — 10
2300	16-19 N	172-55 W		10	1013	21			2			21	3	00	255 — 10
2400	16-26 N	172-47 W		10	1013	21			2			21	3	00	255 — 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 12-1-64 1964 (+10W)

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16-35N	172-42W		10	1012.2	71			1			24	3	220	083 - 10
0200	16-38N	172-37W		10	1011.5	70			2			24	3	220	083 - 10
0300	16-42N	172-33W		10	1011.2	72			2			24	3	220	083 - 10
0400	16-53N	172-28W		10	1010.8	70			5			24	3	220	083 - 10
0500	16-43N	172-24W		10	1010.6	70			2			24	5	220	083 - 10
0600	16-45N	172-17W		10	1010.2	71			2			24	3	220	083 - 10
0700	16-45N	172-11W		10	1010.2	70			2			24	3	220	083 - 10
0800	16-44N	172-02W		10	1010.2	70			2		270	24	3	220	083 - 10
0900	16-44N	171-53W		10	1010.2	70			2		270	24	3	220	083 - 10
1000	16-44N	171-45W		10	1010.2	70			2		270	24	3	220	083 - 10
1100	16-45N	171-37W		10	1010.2	70			2		270	24	3	220	083 - 10
1200	16-45N	171-31W		10	1010.2	71			2		270	24	3	220	083 - 10
1300	16-46N	171-21W		10	1010.3	71			2		270	24	3	220	083 - 10
1400	16-46N	171-14W		10	1010.2	71			2		270	24	3	220	083 - 10
1500	16-46N	171-04W		10	1010.5	70			2		270	24	3	220	083 - 10
1600	16-45N	170-51W		10	1010.2	50			2		270	24	2	240	083 - 10
1700	16-46N	170-47W		10	1010.2	52			2		270	24	2	240	083 - 10
1800	16-47N	170-39W		10	1010.2	52			2		270	24	2	240	083 - 10
1900	16-48N	170-33W		10	1010.3	61			2		270	24	2	210	083 - 10
2000	16-49N	170-24W		10	1010.2	70			2		270	24	1	200	083 - 10
2100	16-50N	170-13W		10	1010.2	70			2		270	24	1	210	083 - 10
2200	16-51N	170-01W		10	1010.2	61			3		270	24	2	230	LYING 7.0
2300	16-52N	169-54W		10	1010.3	60			3		270	24	2	240	11 11
2400	16-52N	170-00W		10	1010.2	60			2		270	24	3	200	11 11

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 1972-11-19 (FRI)

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16-51 N	169-55 W							3			81	3	240	
0200	16-51 N	169-55 W	11						3			81	3	240	
0300	16-51 N	169-59 W	11						3			81	3	240	
0400	16-51 N	170-00 W	11						3			81	3	240	
0500	16-51 N	170-03 W	11						3			81	3	240	
0600									3			81	3	240	
0700	17-16	169-51							3			81	3	240	05/09
0800	20	47							3			81	3	240	
0900	29	43							3			81	3	240	
1000	28	39							3			81	3	240	
1100	17-32	169-35							3			81	3	240	
1200	37	30							3			81	3	240	
1300	42	25							3			81	3	240	
1400	47	20							3			81	3	240	
1500	52	15							3			81	3	240	
1600	57	10							3			81	3	240	
1700	18-13	168-55							3			81	3	240	
1800	17	50							3			81	3	240	
1900	18-14	168-57							3			81	3	240	6
2000									3			81	3	240	
2100									3			81	3	240	
2200									3			81	3	240	
2300									3			81	3	240	
2400									3			81	3	240	

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
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SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 20 Nov 65

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400															04 / 10
0500															04 / 10
0600															04 / 10
0700	19-40 N	168-07 W													04 / 10
0800	47	02													04 / 10
0900	54	167-57													04 / 10
1000	01	52													04 / 10
1100	20-08	167-48													09 / 05
1200	00	42													09 / 05
1300	08	36													09 / 05
1400	08	30													09 / 05
1500	07	24													09 / 05
1600	07	18													09 / 05
1700	07	12													09 / 05
1800	10	06													09 / 05
1900	20-10	168-59													09 / 05
2000		53													09 / 05
2100		47													
2200															
2300															
2400															

REMARKS:

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SI-MNH-955b
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 21 APR 1965

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20-16N	166-03W	30.5	SC	7	1011.2	75			1			23	5	095	087 — 10
0200	20-18N	165-51W	30	SC	10	1011.5	75			1			23	5	095	087 — 10
0300	20-20N	165-39W	30	SC	10	1012.2	78			4		083	23	5	095	087 — 10
0400	20-21N	165-30W	30	SC	10	1012.9	78			3		083	23	5	095	087 — 10
0500	20-22N	165-22W	30	SC	10	1012.5	78			3		083	23	11	095	087 — 10
0600	20-23N	165-14W	30	SC	10	1013.2	79			3		083	23	11	095	087 — 10
0700	20-24N	165-08W	30	SC	10	1013.8	79			3		083	23	9	095	087 — 10
0800	20-25N	164-59W	30	SC	10	1013.2	80			3		083	23	7	095	087 — 10
0900	20-26N	164-51W	30	SC	10	1012.5	80			3		083	23	7	095	087 — 10
1000	20-27N	164-42W	30	SC	10	1011.7	80			3		083	23	7	095	087 — 10
1100	20-28N	164-35W	30	SC	10	1011.5	80			3		083	23	7	095	087 — 10
1200	20-29N	164-24W	30	SC	10	1011.5	80			3		083	23	7	095	087 — 10
1300	20-30N	164-17W	30	SC	10	1012.2	80			4		083	23	5	095	087 — 10
1400	20-30N	164-08W	30	SC	10	1012.9	80			5		083	23	5	095	087 — 10
1500	20-30N	163-58W	30	SC	10	1012.5	79			3		083	23	7	095	087 — 10
1600	20-30N	163-50W	30	SC	10	1011.7	79			3		083	23	7	095	087 — 10
1700	20-31N	163-37W	30	SC	10	1011.7	79			3		083	23	7	095	087 — 10
1800	20-31N	163-24W	30	SC	10	1012.8	80			3		083	23	10	095	087 — 10
1900	20-31N	163-17W	30	SC	10	1012.8	80			4		083	23	10	095	087 — 10
2000	20-31N	163-11W	30	SC	10	1012.8	79			4		083	23	10	095	087 — 10
2100	20-30N	163-03W	30	SC	10	1012.2	79			3		083	23	12	095	087 — 10
2200	20-29N	162-55W	30	SC	10	1011.6	79			3		083	23	12	095	087 — 10
2300	20-28N	162-46W	30	SC	10	1011.9	79			4		083	23	10	095	087 — 10
2400	20-27N	162-38W	30	SC	10	1012.0	79			4		083	23	10	095	087 — 10

REMARKS:

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Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 27 Dec 1964 100 7/10W

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20-27N	162-30W	SCAT CLOUDS	10	1011.9	77			4		1	54	19	130	092 — 10
0200	20-27N	162-29W	11	10	1015.2	79			4			53	17	136	092 — 10
0300	20-26N	162-14W	11	10	1015.3	79			4			54	19	130	092 — 10
0400	20-25N	162-06W	11	10	1016.6	80			4		135	52	19	133	092 — 10
0500	20-24N	161-59W	KNOWLEDGE	10	1019.9	82			7		112	54	18	133	092 — 10
0600	20-24N	161-52W	11	10	1017.7	79			8		030	52	20	137	092 — 10
0700	20-23N	161-44W	11	8	1013.6	71			9		125	51	22	135	092 — 10
0800	20-22N	161-36W	OVERCAST	10	1017.3	78			10		090	52	22	138	092 — 10
0900	20-23N	161-27W	11	8	1016.3	78			10		090	52	22	139	092 — 10
1000	20-23N	161-19W	RAIN	8	1015.8	76			10		030	51	14	137	092 — 10
1100	20-23N	161-11W	BRIEF	10	1019.9	80			8		080	52	23	145	092 — 10
1200	20-24N	161-02W	11	10	1014.7	80			8		080	51	27	130	092 — 10
1300	27	160-54													
1400	30	46													
1500	23	28													
1600	36	30													
1700	37	22													
1800	42	14													
1900	45	6													
2000	48	159-58													
2100	51	50													
2200	54	42													
2300	57	34													
2400	21-00	26													

REMARKS:

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WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS